

Educational Supplement

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PERSONAL COLUMN

I was a strange experience to arrive home from a tour of educational institutions in the United States last Monday, puzzling over the dilemma posed by "magnet schools", and learn that Kenneth Baker is shortly to venture on a similar journey. However he apparently sees no dilemma. His style is to promise to first establish a new sort of "magnet school" (in the form of the city technology college), and go and see how it works second.

I suspect from what I read that he is going in the wrong direction. What he is proposing - a technically-biased, semi-selective education starting at the age of 11 - sounds closer to the German than to the American model. But the relevance of the American experience is that this is seen as some sort of answer to inner city problems.

The problems magnet schools were intended to solve seem to be more social and political than purely educational. During the last two turbulent decades of desegregation, bussing and "white flight", the magnet schools were offered as a sweetener and a distraction; a reassurance that the public school system was still committed to "quality" and "excellence" (two key buzz words). Subliminally (and not so subliminally), the message was this. Bear with us, and the difficulties we are all facing, until your kid is 14; after that he can escape into a special science programme, or a performing arts academy. And for anyone else who doesn't want to be stuck with the regular high school, there are alternatives - pre-nursing, "automotive arts", horticulture.

Magnet schools are also promoted as a cure for the problem of drop-outs that obsesses American urban educators. The term needs to be judged in a comparative sense. "Dropping out", I was told in one of the many "horror stories" of the "horror level" of per cent of its 18-year-olds in full-time education would receive the Society of Education Officers' Gold Medal.

In Boston, I visited a Catholic "international school". In curricula terms this means the availability of a number of foreign languages (including Chinese and Japanese) and an emphasis on international



ANNE SOFER

Fatal attraction

'The problems magnet schools were intended to solve seem to be more social and political than purely educational'

affairs within the social studies programme. The school is interesting in another respect.

As a small (500), centrally-located school with no significant residential neighbourhood, it lends itself to city-wide recruitment. It is heavily over-subscribed - six applicants for every place. But like all other Boston high schools (apart from a very few "exam schools") it is obliged to recruit a representative ethnic mix: this means proportions of black, Hispanic, white and other groups in that order of magnitude. A computer sifts all the applications to produce an ethnic - and ability - cross section.

Despite this, the school does not practise "tracking" (streaming): its drop-out rate is less than 5 per cent. Small, heterogeneous in intake but not in purpose, with a strong no-nonsense academic flavour - these seem to be the keys to its success, achieved apparently without "creaming" the rest of the system.

would otherwise stay in the private parochial system. This is true of many of the more academic magnet schools. Most of them, however, are in the inner city, and the system; the "dumping" of all the least able, least motivated students in the ordinary high schools which can then acquire a notoriety based more on intake than performance.

In Manhattan, I visited one such school, Julia Richman, which was smarting from recently having been named in the press as "one of the five worst schools" in New York. Situated in the elegant upper East Side but in fact recruiting almost entirely from Harlem, it was busy compiling evidence that its academic record was actually better than that of some of its more prestigious rivals.

I was shown a letter to the press - well-written and full of passionate indignation - from a senior student who described her experiences and feelings in trying to defend her school against ignorance and slander.

Visiting another school later in the day, I commented neutrally that Julia Richman had seemed an orderly enough institution. "What?" "Really? Hey, listen to this!" Teachers at a school only a few blocks away gathered around in astonishment. For an inner Londoner, this was curiously familiar.

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tested: one magnet school principal reported that her school was already 90 per cent black or Hispanic.

Indeed, more and more Americans are beginning to say that inner city education is not a race but a class issue. "White flight" has become "middle class flight". This is borne in on me powerfully as I watch the Columbus Day Parade down Fifth Avenue last Saturday. Among the traditionalists, the parochial schools, with their bands and cheerleaders, were prominent. Only a few schools from the outlying suburbs were substantially multi-racial. One private school, carrying a banner inscribed "Excellence in Private Education" had an almost entirely black student body.

In Boston, the traumatic experience of bussing is now being reassessed by the liberals who fought hardest for it at the time. There is a recognition that in forcing black and poor white parents in the city to cross-bus their children while placing neighbouring schools in the middle class suburbs, the liberal establishment was adopting a morally indefensible stance.

In fact, as long as social and economic conditions in inner cities remain as they are, school systems face an intractable problem: how to retain in the system the aspiring, motivated, while, not at the same time isolating and further depressing those at the bottom of the pile. Different politicians in different cities try to solve this in different ways. To impose a solution from outside colleges are likely to create more problems than they solve.

NEXT WEEK

Will Kenneth Baker recognize the need for a new review of the special schools?

Scientists in schools
Hugh David on the Adoption Bill

Education Bill
Report on the final reading
Extra
Computers

Right-wing Conservatives' sex education amendment defeated

Bill survives rebellion by 40 MPs

by Sue Surkes and Bert Lodge

The Government's controversial Education Bill was finally steered through the House of Commons in the early hours of Wednesday morning despite a rebellion by about 40 Conservative MPs over its sex education clauses.

Within hours of the marathon debate ending, the Bill - which must now go back to the House of Lords next week before receiving the Royal Assent - was facing heavy criticism.

Mr Gordon Cunningham, the education officer for the Association of County Councils, said: "This Bill got worse as it went on. The best thing would have been if it had fallen last night. It will create more problems for the education service."

He was particularly worried about a new clause - rushed through at the last moment in response to a House of Lords ruling on school transport last week - requiring I.e.s.s. to take account of pupils' age and their route to school before deciding whether to issue them with bus passes. He said the clause was "worryingly imprecise".

New clauses agreed by the Commons during the 12-hour debate meant: governing bodies will now take control of sex education and decide whether parents should be allowed to withdraw their children from lessons. An amendment by Mr Peter Bruin-

gives, MP for Leicester East, giving a blanket right for parents to withdraw their children was defeated - with Labour supporting the Government - by 301 votes to 46.

Governing bodies will have to consult the head and consider representations from the community and the chief of police - on matters which concern him - when discussing curriculum matters.

All steps "as are reasonably practicable" must be taken by university, polytechnic and college governors to ensure freedom of speech "within the law".

Any governing body of a school whose head has been told by the I.e.s.s. to reinstate an expelled pupil will have a right of appeal. Any pupil aged at least 18 or a parent if the pupil is aged less than 18 may also appeal.

This governing body clause is aimed at eliminating any similar row to the one at Poundswick high school in Manchester.

Immediately after the debate, Mrs Frances Morrell, Labour leader of the Inner London Education Authority, announced she would begin consultations with headteachers and governors over sex education.

Mr James Hammond, deputy general secretary of the National Confederation of Parent-Teacher Associations, speaking personally, welcomed the defeat of the right-wing Tory MPs' amendment - saying he felt such a move "would be a bad thing for schools".

Education officers in Conservative-controlled Hampshire are worried that Mr Kenneth Baker's proposed City Technology Colleges could undermine the secondary school reorganization that has recently taken place in Portsmouth and Southampton.

A senior officer said this week that a CTC could be sited in either city only if "substantial further reorganization were to take place".

Last year Portsmouth abandoned 12-13 schools and introduced 12-16 schools alongside a sixth-form college. "We have now got as near as possible to matching the number of pupils to the number of school places available," the officer explained. "Any



Pupils at the West London Tamil school celebrated the Navaratri festival in honour of the patron of education, Goddess Saraswati, with dances, songs and music. The school's second London Tamil Reader, funded by a £1,000 grant from the Council of Churches is available from the school at 179 Norval Road, Wembley, Middlesex HA9 3SX, price £1.50.

Pay held up as county goes on computer

by Ian Nash

Newly-promoted teachers in Lincolnshire have still not received their salary increases because of reorganization within the education service.

In all, 500 teachers employed by the Conservative-controlled county council failed to receive their pay cheques, which were delayed by the introduction of a new computerized records system and the axing of 117 clerical jobs.

They were finally paid about two weeks late, but many of the cheques did not take account of any regrading. NALGO, the local government officers' union, has warned the problem may get worse if the jobs are not restored. It is balloting its members on a ban on overtime and has passed a vote of no confidence in the county council's management abilities.

The union is also considering a ban on the use of telephones if it goes ahead with industrial action.

Mr David Chrisp, Lincolnshire's deputy director of education, described the problems as "teething pains" and said the complaints were out of proportion.

He accepted that the transition to computer records had shown up some weaknesses in the reorganization. The authority had decided to employ two extra full-time and six temporary staff, but NALGO rejected this as "inadequate".

Mr Brian Cowell, county secretary for the National Union of Teachers, which threatened the authority with legal action for breach of contract, said that despite the salary difficulties, "teachers can only sympathize with the plight of the clerical staff".

The administrative problems are numerous. At a recent meeting of headteachers, we were told we might have to wait up to two months for a reply to letters. That is appalling, it can only mean problems in schools getting worse.

In fairness to the authority, individual problems were quickly dealt with when drawn to its attention, he said. "But the unavoidable conclusion is that staffing levels are totally inadequate."

Other complaints from the schools and colleges include delays in the appointment of headteachers, and in the issuing of bus passes and payment of student awards.

The reorganization has also hit teachers who were employed on temporary contracts which expired at the end of the summer term. Those who were re-engaged to work at the beginning of the autumn term were among the 500 who received no initial pay cheques.

The authority also asked its headteachers this week to report all teachers who are refusing to cover for absent colleagues. The NUT is refusing to cover beyond the first day of absence.

NOTICEBOARD

PEOPLE...

Mr John Coffey (above), director of the Southampton office of the Council for Educational Technology, to be principal of Volsey Hall, Oxford, from January, on the retirement of the Hon Frank Fisher. Mr Donald Grant has been reappointed chairman of the CET for a further three years.

Mr Nigel Turner, employee relations manager at Ford's (Dagenham), to be director of personnel services and equal employment opportunities at the Inner London Education Authority. Professor Sonny Nampal and Professor Sir Hermann Bondi, to be distinguished visiting professors to Exeter University for 1986-87.

CONFERENCES...

October 22 Council for Education in World Citizenship United Nations Conference with Doreen Wells MP, Sir Philip Marshall and Mrs Doreen Wilson Smith at the House of Commons. Details: CEWC, Seymour House, Seymour House, London W1H 9PE.

October 27 Sixth-formers and foundation-year students' conference on *The Artist* Publishers at the Crafts Council in conjunction with the current exhibition. Details: Sue O'Reilly, Education Officer, Crafts Council, 12 Waterloo Place, London SW1Y 4AU.

October 29 Information technology and special needs students in mainstream further and higher education, organized by the National Bureau for Handicapped Students, in London, to examine staff training needs, supporting students in mainstream FHE and assessment needs. Details: Sylvia Simmons, NBHS, 336 Brixton Road, London SW9 7AA.

November 8 National Association for Primary Education conference on *The use and misuse of technology in education* at Robert Bloomfield middle school, Bedfordshire. Speakers include Dennis O'Connor and Cyle Hampton. Fee £5.50. Details: Mrs B. Biggs, Brickhill lower school, Dove Road, Bedford MK41 7AA (stamped addressed envelope required).

November 8 Women in Education annual conference on *Creating the barriers at St Anne's Hotel, Buxton*. Speakers include Carol Adams, Hazel Taylor. Details: Penny Pennington, 28 Edgebrook Road, Nether Edge, Sheffield S7 1SG (stamped addressed envelope required).

November 17 Economics Association sixth-form careers conference on *The role of the economist at the Institution of Mechanical Engineers*, 1, Shrogge

Walk, London SW1. Details: Mr E. James, 63 Cannon Lane, Primor, Middlesbrough TS1 1HN.

EVENTS...

October 18 International Association for Teachers of English as a Foreign Language (north west) talk by Paul Kleinman on *Drama strategies in language* at Longlight Library, Stockport Road, Manchester. Details: Jenny Jewell, Central Manchester College, Openshaw Centre, Whitworth Street, Manchester M11 2WH.

October 21 Multicultural education, Wycombe Education Concern open meeting in the Parish Rooms, Castle Street, High Wycombe, at 7.45pm with Jane Lane, Lalla Ramdeen and David Smith. The guest speaker at the annual meeting on November 12 at Buckinghamshire College of Higher Education will be Professor A.H. Halsey.

From October 22 A series of informal meetings on the environment, minority rights, politics and religion, human rights at the CEWC UNESCO Centre, Seymour House, London W1H 9PE at 5.15pm. Speakers include Jonathan Ford, Ben Whitaker, Brigadier Michael Harbottle, Alice Dickson, Rabbi Julia Neuberger, Julia Hausmann, and Dennis Absa. Details: CEWC (address above).

From October 23 A series of public lectures at the Tavistock Clinic on Thursday evenings from 8pm to 9.30pm. Subjects include: *Helping depressed mothers of young children* (October 30); *A psychoanalytic approach to*

mental handicap (November 6) and *Child abuse* (November 13). Details: Mrs Rosalind Wilson, chairman's office, Tavistock Clinic, 120 Belgrave Lane, London NW3 5BA.

November 1, 8, 29 Archaeology in Britain study days at the British Museum on prehistoric Britain, Roman Britain and Anglo-Saxon Britain with slide lectures and gallery talks. Open to all, entry is free, but places must be booked in advance. Details: the Education Service, British Museum, Great Russell Street, London WC1B 3DG.

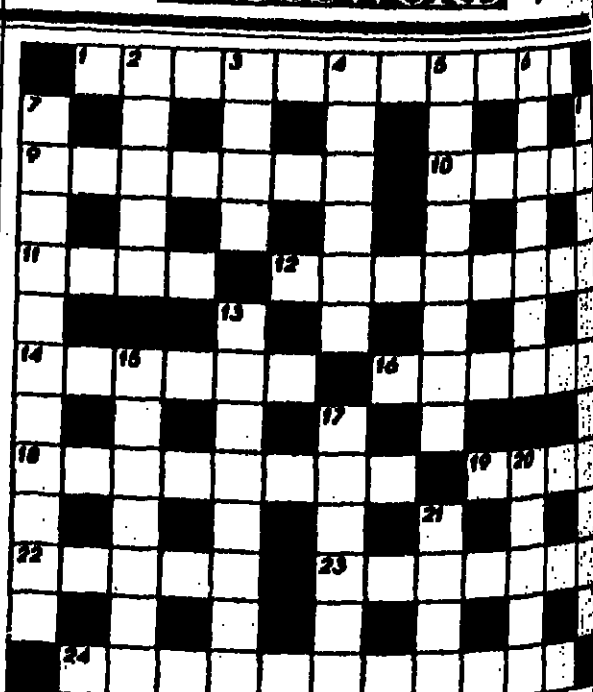
COURSES...

November 7-9 Seminar on computerized weave and textile design for teachers and lecturers at the University of London's Wye College European Centre. Fee £184. Details: Harris Looms, Wotton Road, Ashford, Kent.

November 12 *Portraits, Paintings and Portmanteaus - 17th-century arts and society*, a course for secondary school teachers at the National Portrait Gallery in the morning and the Gelfrey Museum in the afternoon. Details: Secondary teachers' course, Secretaries Office, National Portrait Gallery, St Martin's Place, London WC2H 0HE.

November 21-23 Country Village training programme at Tavistock Hill field studies centre on the use of local urban and rural environments for teachers, youth and community workers, in field scouts and environmental groups. Readers: Fee £54. Details: Tavistock Hill Field Centre, East Bergholt, Colchester, Essex CO7 5UJ.

No 276 CROSSWORD by Ruler



Across

- 1 Resistance leader whose aim was perfection (7, 4)
- 9 First sensation it is writing (7)
- 10 One of the family on the Riviera, we hear
- 11 Members giving personal support (4)
- 12 Watch a gossip-monger (5)
- 14 A few may be bi-racial (6)
- 15 Domestic service (3, 3)
- 16 Answer real change in a better system (9)
- 17 It can't be passed in silence (4)
- 22 Nobody ever gets the best of you get out (3, 2)

Down

- 2 It may make a toping sweet (5)
- 3 Put down face up (4)
- 4 They fight with one another (6)
- 5 Offered to look at an assemblage of deer (8)
- 6 Real trouble upset Ophelia's brother (7)
- 7 A little creature (11)
- 8 Capital cover for a snapper (11)
- 13 Nothing settled, 1

This week

- 15 Handy job in a garden (7)
- 16 A young man in a suit (7)
- 17 His by intention (7)
- 20 A young man in a suit (7)
- 21 Each up in front of the old girl (7)



Philip Merridale

City colleges worry Tory I.e.s.a.

by Barry Hugill and Geraldine Hackett

Education officers in Conservative-controlled Hampshire are worried that Mr Kenneth Baker's proposed City Technology Colleges could undermine the secondary school reorganization that has recently taken place in Portsmouth and Southampton.

A senior officer said this week that a CTC could be sited in either city only if "substantial further reorganization were to take place".

Last year Portsmouth abandoned 12-13 schools and introduced 12-16 schools alongside a sixth-form college. "We have now got as near as possible to matching the number of pupils to the number of school places available," the officer explained. "Any

proposal to remove 700-1,000 pupils (the proposed size of a CTC) would create enormous problems".

A similar reorganization has taken place in Southampton and later this month the schools sub-committee will be looking at a plan to restructure 16-19 provision in the city along tertiary lines. That restructuring could be threatened if a CTC were to be sited in the city.

Mr Philip Merridale, the chairman of Hampshire education committee said the two cities had made considerable provision in terms of sixth-form colleges.

"Any 11-18 technical college could not be established for some time. If one were to be sited in Portsmouth or Southampton we would have to make sure our re-organization is attractive enough to compete against other choices. Actually finding a site for such a college would be difficult," he said.

The Society of Education Officers said this week that pronouncements by Mr Baker and some MPs give their members "cause for concern and irritation".

Concentration on CTCs, the antics of the extreme Left and parent power might be politically appealing, but they offer little consolation to those committed to the overall well-being of the education service.

Other complaints from the schools and colleges include delays in the appointment of headteachers, and in the issuing of bus passes and payment of student awards.

The reorganization has also hit teachers who were employed on temporary contracts which expired at the end of the summer term. Those who were re-engaged to work at the beginning of the autumn term were among the 500 who received no initial pay cheques.

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NAS

NATIONAL ASSOCIATION OF SCHOOLS

Pay troubles ahead

Sex education!

All change at A level

Spanish Civil War

EXTRA: Computers 35-62



EDUCATIONAL SUPPLEMENT
Priory House, St John's Lane, London EC1M 4BX. Tel 01-253 3000

Damaging and deplorable

The announcement that the National Association of Schoolmasters/Union of Women Teachers is to call a series of half-day strikes, starting on November 3 is only the latest evidence of the impulse for self-destruction which now threatens once again to engulf the teachers' unions.

Mr John Pearman, the local authorities' leader, came out with a bitter denunciation of the proposed strikes as a blatant attempt by the NAS/UWT to exploit the present difficulties to recruit dissident members of the NUT. This doesn't look wide of the mark. The NAS/UWT is only continuing the long-standing membership war in which it and the NUT have been engaged since time immemorial. Earlier this year it was the NAS/UWT which acted the part of the responsible union, trying to find a way of ending the dispute while the NUT, as gadfly, paraded its combative credentials to recruit disenchanted NAS/UWT militants.

Since Coventry, their roles have been reversed: it is the NUT which wraps itself in the mantle of statesmanship and loses members as a result.

Throughout the past three years of strife punctuated by intermittent periods of truce, there have been significant shifts in union membership—notably the growth of support for the Professional Association of Teachers and some increase of strength to the Assistant Masters and Mistresses Association. Both

the big unions, NUT and NAS/UWT, were probably net losers, though there may well have been parts of the country where movement took place against the national trends. The dreary fact is that no action is ever taken by either the NUT or the NAS/UWT without a careful assessment of the consequences in terms of their mutual struggle for members and their eye for the main chance.

Since Coventry it has become increasingly clear that it would require remarkable courage and imagination to carry the deal through to completion. It was all too easy to see how the momentum engendered in the ACAS talks could be lost; all too easy to see why it would be unlikely that Mr Pearman could get away with steam-roller tactics at Nottingham to repeat the success of Coventry. The teachers' front has shown signs of crumbling. The NAS/UWT strike threat is only the latest evidence of opposition among the rank and file. The Main Report on teachers' salaries in Scotland has opened up a treacherous mine for revisionists seized with a vision of getting the best of both worlds.

The Government will soon have to indicate its attitude to Main, though a definitive statement on Scotland can hardly be made without some clear idea in the Cabinet on what to do about England and Wales. It must be in Mr Baker's interest to do nothing in advance of Nottingham which could appear to undercut the authorities or prejudice the

possibility of progress on the teachers' contract. But it is plain that the Coventry package is the wrong shape for Mr Baker, and that the Government is likely to be much more favourably disposed to the hierarchical structure put forward by Main than the more "collegiate" formula built into the Coventry deal to benefit the teachers now on the lower scales.

Mr Baker's inclination must be to stand back and watch what happens at Nottingham where there seems little chance of a miraculous accord. If there is no agreement in sight the Government will then be in a strong position to argue that there is no realistic alternative to an imposed solution. If, that is, any solution can be imposed against the will of the teachers and their employers. Such a solution would have to reconcile the needs of England and Wales with those of Scotland—and still conform with the Government's economic requirements.

The prospect is fraught with all manner of danger. The NAS/UWT strikes (which are planned to take place without a ballot; perhaps someone will seek an injunction) are deeply deplorable and wholly to be condemned. Their timing is crude and they betray a desperate cynicism about the profession of teaching and its obligations. But if the Nottingham negotiations fail, who can be sure they won't simply be the first in another sequence of damaging and self-destructive teachers' strikes and programmes of industrial action, dragging teachers and the education service deeper and deeper into disrepute?

COMMENT

Caught in the Act

Mr Baker's Education Bill, festooned like a Christmas tree with last-minute additions, finally went through the House of Commons on Tuesday night.

What has emerged is an unrecognisably messy piece of legislation. Nobody foresaw the dangers of starting an innocent Education Bill in the undisciplined House of Lords until it was too late. The result is a measure which has considerably extended the range of legal hazards which beset heads and governing bodies and may well give the lawyers a field-day.

The path is now littered with new pitfalls for the unwary. Litigious parents, governors who fancy themselves as barrack-room lawyers, heads who are jealous of their prerogatives (as they jolly well should be)—all will be tempted to rush to their solicitors every time one protagonist or another fails to observe the letter of this complicated (and, for much of its length, unnecessary) law.

Control of the curriculum continues to be obscure, with heads acting as arbiters between their own governors and their own employers in case of dispute. The Bill places quite unreasonable faith in written policy statements and curriculum documents. Heaven help us all if (or when) the judges ever have to construe these works of art (or fiction) and decide whether A or B or C has acted in accordance with these masterpieces of amateur drafting.

It will take some while to bring in to force the revised articles of government needed to give effect to the clauses on membership of governing bodies. Only time will show how successfully these will relax the political grip of the councillors.

Time will also show how long it is before new forms of politics take over—whether, for example, the 1986 Act will accentuate the tension which often exists in the relations between school governors on the one hand and county or city hall on the other, and if so, how this will affect the exercise of powers and responsibilities.

There remain the odd decorations hung on the Christmas tree. It is anomalous (but less sinister than it

might seem to a Martian visitor) to know that the local police chief's views on the curriculum must now be accorded special consideration. It is interesting to know that Parliament expects universities, polytechnics and all the other institutions of further education to be uniquely capable of guaranteeing a fair hearing to all comers, no matter how provocative. This clause promises to create as much trouble as it solves. And the clauses on sex education simply pass the buck back to the school governors.

Sex education is always going to be controversial, or potentially so. From time to time incidents occur or publications appear which catapult it on to the front pages. The latest capers in Brent and Haringey happen to be raising the temperature of the moment, and there will be other left-wing local authorities which will follow in their footsteps. But these media-interesting phenomena do not necessarily make as much impact on the schools as they do on Members of Parliament and the pressure groups which claim to speak for the moral majority.

Many people will wonder whether it makes sense to legislate on these matters from the hip (so to speak), pulling out new clauses for the Education Bill like mottos from a Christmas cracker. Mr Baker has solved his immediate problem by making his new governing bodies take sex off his hands. By so doing, he has saved his Bill and avoided embarrassment for the Government. But this doesn't mean governors will necessarily be competent to do what is now asked of them. It simply means that potential difficulties are now likely to be more diffuse, and therefore less acute and politically exciting.

As Trevor Phillips found out for his *This Week* TV programme (page 4), sex education has to be the schools' responsibility because most parents lack the knowledge, vocabulary and confidence to talk to their children on intimate matters. Such ignorance and diffidence makes an odd qualification for the responsibilities the Bill now puts on parent governors and their colleagues. But all being well, they will see their role as members of a jury in a common-sense judgement when the head puts his/her proposals before them.

In most places, most of the time, it will work smoothly. But it certainly

won't prevent left-wing local authorities from campaigning to persuade their schools to smile at lesbian women and homosexual men if that is an aspect of equal opportunities they feel strongly about.

The significance of this Bill is to be found in the attempt to build up the local management of the individual school and push the local authority into the background. It reflects the present powerful distrust of local government which the Conservatives at Westminster share with their civil servants.

The simple fact is that local democracy is breaking down and this is becoming increasingly serious for education as a service administered by local education authorities.



Whither Infotec?

"Where next?" is the title of the lead article in the section on computers in education (pp35 to 62). That is certainly a question Mr Kenneth Baker—not so long ago Minister for Information Technology—should be asking. The article shows a range of interesting work done with applications such as databases, word processors and computer control, as well as facilities used across the curriculum. It is

still plenty of room for continuing educational debate about specific uses, but the place of computer applications in the curriculum now seems tested and assured.

The trouble is that too many teachers and pupils simply do not have access to those applications. Most teachers have not been given the time needed to investigate their possibilities, and there are not enough machines in most schools for all pupils to "become familiar with the use and application of computers, particularly through direct experience in the course of their studies", as the 1981 Department of Education paper on the school curriculum demanded.

The Government's new Microelectronics Support Unit has been planned along perfectly sensible lines, given limited resources, to train teacher trainers, disseminate existing methods and software, and do a bit of development work with state of the art technology.

But the best that can be hoped for, under the new in-service training and support structures, is a slow continuing movement that will leave most teachers and secondary school students pretty well untouched.

As things stand, only the handful of local authorities that have taken it seriously, a few other schools that have gone it alone (often with the help of better off parents), and an increasing number of independent schools are giving all their pupils a good grounding in information technology. They will, no doubt, be joined by Mr Baker's projected city technology showplaces.

It is important that all pupils have that grounding. Mr Baker will have to do a great deal better than that. The crude fact is that if all pupils are to have significant experience of information technology, schools need many more, and more powerful, computers. And teachers need time to learn how to use them.

If enough machines could be put into schools to make a real impact, a lot more development work with up-to-date technology would still be needed to develop good software for the latest generation of cheap powerful machines. They could be used in all subjects, to encourage more active learning in the ideal CGBS and primary style. And they could replace many of those dreary worksheets, once and for all.

Second opinion Restricted powers of persuasion

The idea (suggested in TES 10.10.86) that I have the power to co-textbooks used in inner London schools is just one of many more about the Inner London Education Authority. Like the others, it is more relation to a wish to attach authority than to what is actually doing.

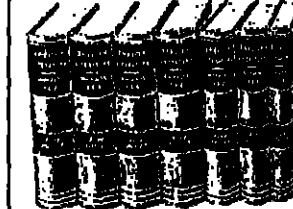
The responsibility for buying books rests where it has rested since the passage of the 1944 Education Act with the headteacher and school governors. However much I might want to dictate to a school, I have no power to order it to buy or not buy any particular book. I would not have it any other way.

Heads and their boards of governors have several choices open when they decide what book they want to buy. They can ask our Trading and Supply department to get it for them, in which case they will benefit from one of our most efficient and cost effective purchasing departments in the country; or they can order it from a local bookseller or direct from the publisher.

The ILEA makes recommendations about the books its schools should consider buying—as do most education authorities—as it has access to professional and expert advice on the many subjects in the curriculum. And with its schools and colleges, it also has a commitment to equal opportunities and quality of education.

It was a key part of our manifesto at last ILEA election, an election which resulted in an overwhelming vote of confidence for those policies.

Textbooks obviously have a key role to play in equal opportunities—and widely acknowledged by educationists and by the Swann committee in 1985 report. But you do not have an educational expert to realise it.



school books that put over positive images relevant to equal opportunities are more likely to appeal to a book. This is common sense, not indoctrination, and is the same advice the Educational Publishers Council gives to publishers.

The ILEA is one of the country's largest educational publishers, and produces some of the teaching materials that a head will consider buying. Our Auschwitz pack, which you described as "notorious", received a warm welcome from your reviewer at the time who described it as "extremely useful".

Finally I find the suggestion that I would intervene personally to meet the purchase of books that put over partial view of the political situation in Central Africa to be unfounded and unacceptable.

Far from putting same and imposing policies at risk, the ILEA is doing its best to protect and enhance the use of equal opportunities and quality of education in London. It is not immune from criticism; but for it to be effective that criticism should be founded on fact rather than fiction.

John Carr
John Carr is chairman of the Inner London Education Authority's trading and supplies committee.

...no comment

As believers in the Lord Jesus we are seeking to bring up our children in the Christian faith. I would therefore request my daughter to be removed from RE lessons. Letter from a parent at a primary school.

TES staff report on a gloomy week for salary negotiations covering teachers and college lecturers

Strikes dampen hopes of pay deal

by Geraldine Hackett

Industrial action in schools and inter-union discord make a final agreement on teachers' pay and conditions at next month's Nottingham talks look increasingly unlikely.

The National Association of Schoolmasters/Union of Women Teachers is organising half-day strikes in the run-up to the negotiations—a move that has angered Mr John Pearman, the employers' chief negotiator, and the other teacher unions.

The NAS/UWT is not alone in wanting to re-open negotiations on the pay structure agreed at Coventry in August. But while the NAS/UWT is seeking higher rates for the Main Professional Grade, the other unions want to see improvements for teachers above grade three.

It is, however, only the 42,000-member Professional Association of Teachers that is calling on the Education Secretary to step in and impose a pay deal.

The strike action by NAS/UWT members will begin on November 3, in London, and culminate in a demonstration in Nottingham as the talks get under way on November 8.

The union does not intend to ballot its members, even though strikes without a ballot are now unlawful. Local authorities can apply to the High Court for an injunction to halt the strikes, but they may be loath to take such action just days before a new round of delicate negotiations.

Mr Fred Smithies, the general secretary of the NAS/UWT, said that the union viewed the Nottingham talks as an opportunity to re-open negotiations, particularly on the maximum

salary for those on the Main Professional Grade. The figure agreed at Coventry was £14,500—a rate that would not be reached for two years.

The union maintains that this compares badly with the deal proposed by the Main inquiry into Scottish teachers' pay, which envisages a Senior Teacher grade carrying a salary of £15,000. The NAS/UWT estimates that the Main proposals will get proportionately double the amount of the Coventry package.

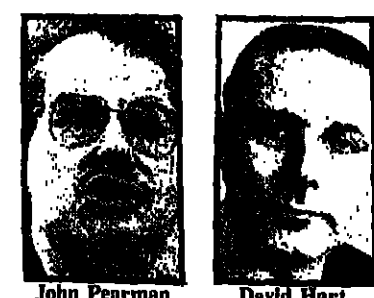
The Scottish pay rises are dependent on acceptance of more onerous conditions of service, whereas the conditions for teachers in England and Wales have yet to be agreed.

The local authority employers were due to meet today to discuss proposals to be put to the unions in Nottingham. They specify maximum class size and classroom time as well as supply cover arrangements.

Talks on reforming college lecturers' pay and conditions became deadlocked during last weekend's crucial meeting in Nottingham between employers and unions.

The biggest union, the National Association of Teachers in Further and Higher Education, walked out on Sunday claiming that it was impossible to make headway as employers refused to discuss pay.

Both sides expressed bitter disappointment at the outcome and accused each other of causing the breakdown. They had been hoping to reach



John Pearman David Hart

Mr John Pearman is keen that the Coventry accord should not fracture and says he is "not prepared to contemplate failure". "I have cleared my diary for the week of November 8 and I think we have to stay in Nottingham until an agreement is reached," he said. Mr Pearman was due to meet Education Secretary Mr Kenneth Baker this week.

The failure appeared to come as a shock to the negotiating teams as they had been meeting in small working parties during the past three weeks to thrash out details of structural reforms. An agenda was agreed last week.

The employers wanted to take the agenda "sequentially" before discussing pay. Mr Neil Fletcher, chairman of the management panel, said: "You can't talk about the price until you have been through the shopping list items."

The first item on the agenda—teaching hours—proved to be a sticking point. Employers want a one-week maximum of 22 hours which could be exceeded for up to 10 weeks to 26 hours.

NATFHE claims this would put more than 11,000 lecturers out of work. It was due to hold an emergency executive meeting yesterday at which calls for disruptive sanctions were expected to be discussed.

No further meetings between the two sides have been arranged.

MPs united in criticism of union

Spokesmen from the three main political parties used the platform of the National Association of Schoolmasters/Union of Women Teachers' own conference this week to condemn its renewed action.

The all-party barrage was led by the Minister of State for Higher Education, Mr George Walden, who accused the union of a "self-interested piece of malice".

Labour education spokesman, Mr Andrew Bennett, insisted strikes should only be used as a last resort. "It is up to teachers to find out how they can turn Coventry into a lasting settlement," he said.

And Mr Clement Freud, for the Liberal/SDP Alliance, condemned the action as "wrong and ill-considered". It would lose parents' sympathy for the teachers' case, he said.

The three MPs were speaking at the NAS/UWT education conference in Birmingham on Tuesday. They were responding to the union's planned series of half-day strikes in the week leading up to the renewed round of pay talks to take place at Nottingham.

Mr Walden described Monday's strike announcement as "shameful". "How much misery are children going to suffer?" he asked. "How much education is to be denied to them?"

But Mr Fred Smithies, the union's general secretary, was unrepentant. "Teachers have learned from bitter experience that patience and rational behaviour do not produce results."

WHAT TEACHERS WANT FROM THEIR UNION

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L.e.a.s raise safety alarm

by Ian Nash

Health and safety standards in schools are governed by crisis management, according to interim results from a survey of local education authorities to be published later this year.

The detailed study of 20 L.e.a.s in England and Wales revealed inadequate monitoring, a lack of suitably trained staff and a negative attitude towards health and safety from politicians.

Health and safety monitoring appears to be fully effective in fewer than a quarter of authorities, said Mr Jim Norbury, the Health and Safety Consultant responsible for the survey. "In three authorities, monitoring was very limited."

Delegates to a conference of about 50 L.e.a. health and safety advisers and consultants in Cumbria this week said the rapidly decaying and poorly maintained building stock contributed substantially to health and safety concern.

Cumbria alone needs to spend £28 million annually for 10 years to remedy its backlog of building repairs and replacements.

Also disturbing, said Mr Norbury, was the lack of trained personnel. More than half the authorities surveyed had only one adviser each to manage health and safety.

Members of Labour's front-bench education team have reacted angrily to local authority leaders' claims that they have failed to make an impact during House of Commons debates on the Education Bill.

The front-benchers intend to press for action within the Association of Metropolitan Authorities. The row comes at an embarrassing time for Labour's education spokesman, Mr Ollie Radice. Although the education does not figure high on the campaign, it comes just a week before the Shadow Cabinet elections. Mr Radice described the allegations as "a disgrace" and "without foundation". His claims were made in an



Over 300 children arrived at London Zoo earlier this week clutching Care Bears, Rupert Bears, Paddington Bears, Smurfs and - simple Teddy Bears. They had come to celebrate Winnie the Pooh's 60th birthday together with his friends Piglet, Tigger, Eeyore and Kanga.

Front-bench fury over AMA attack

AMA briefing to its representatives in the Commons. The Labour team's defence of local government was also criticized.

The final paragraph of the briefing says: "Leading elected members of the AMA have been most disappointed and frankly let down by the fact that during this Bill's progress through both Houses, the arguments which the association commends to its friends in Parliament have not been rehearsed with any great emphasis."

"Indeed, it appears to AMA that virtually no weight has been given to the achievements and good administrative practices of nearly all L.e.a.s on every issue on which this prescriptive

PRIMARY

Julia Hagedorn visits an infant school that has gone into 'partnership' with two multinationals

Big business comes to the Wendy House

When Mr Kenneth Baker urged employers to forge strong links with their local schools, it is unlikely he had infant schools in mind.

All the more credit then to Whitehall infant school in Hillingdon, West London, which has been "adopted" by multinationals Hewlett Packard and Rank Xerox, a local bank, a firm of architects and a garden centre.

Although it is at first difficult to see what an infant school can offer a company, Whitehall's head, Mrs Elna Davies, stresses that the links are not simply a means of obtaining extra resources. "It's got to be reciprocal. At mutual advantage. It's not fair to keep asking without giving something back."

Hewlett Packard has run a highly successful introductory computer course for teachers, presenting personalized training booklets to each member of staff. It has also given the school 20 push-button telephones to use for imaginative play in the home corner and has donated an architect's model of the training floor in the firm's new Uxbridge building. This will be used as an aid for the children's own model-making. They have already drawn up plans to build Lego models of their homes.

Hewlett Packard is also setting up a computer training day for parents which will look at developing maths and language software.

Rank Xerox, meanwhile, has given advice and practical help in producing school leaflets and a parents' handbook. The firm is also to talk to the school about management consultancy techniques and appraisal, and whether a corporate image is suitable for the school.

Help with the school's introductory brochure has come from architects, Treadgold. And the local branch of Midland Bank has offered a regular photocopying service for parents' leaflets in languages other than English.

So how has Whitehall infants reciprocated? The foyer of the Hewlett Packard building has a display of the

children's artwork on computers and another has been planned for Rank Xerox. And invitations for the school's summer barbecue were sent to all the companies.

There is another side to it, of course. Mr Keith Harvey, educational logistics manager from Hewlett Packard, said his company was anxious to dispel myths about people in industry being aghast. "The children will see people who are just like mummy and daddy so that in 10 to 15 years they will no longer see industry as a big bad world." The company also gets a spin-off from parental participation, he admitted. It was good for the company image to be seen putting something back into the community.

To those who might question an early emphasis on the importance of the commercial world, Mrs Davies has an answer. Exposure to the multinationals simply opens yet another door to them. The choice to go through it or not will be theirs when they reach adulthood.

Mrs Davies stressed that the long-term aim was to help children understand - and respect - the world of commerce. She is also eager for schools to be aware of how they present themselves to their community. And by community, she does not just mean parents but the wider community of local groups, organizations, industry and commerce.

Religious differences are another sensitive point. There are those who believe in the forces of evil as well as those of good. The celebration of Halloween, for example, is often seen as a pagan festival which stimulates their interest in the occult to an extent that is harmful to young children, the inspectors said.



Construction company: Whitehall infants specialize in house building... with Lego bricks

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Hallowe'en stories 'can be far from a treat'

Hallowe'en is fast approaching and teachers who are tempted to fill in the odd gap in the timetable with the story should beware.

Dr Bill Stubbs, Inner London Education Authority's education officer, receives a small but continuous stream of letters from parents who are concerned that their children's minds in the occult is being over-stimulated by some teachers.

This may involve teaching about witches, computer games with a "fear" element, or the celebration of Hallowe'en, according to a letter to all London headteachers by the ILEA inspectors.

The letter warns heads about possible inaccuracies in their teaching. "Many stories of witches," for example, "fail to inform children that the use was often applied to women who were alone and who were victims of superstition and cruelty."

The inspectors are also concerned about heightening children's fear. "We are aware," they write, "of children who have been badly frightened by stories and other activities at the point where it has caused severe disturbed behaviour."

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Three little Welsh maids from Twickenham... took part in the first festival of languages held at Warwick University last weekend. The event was designed to encourage competence in any language other than English and to show that learning can be fun. Report in next week's Modern Languages EXTRA.

Fund-raisers warned about 'moral blackmail'

by Julia Hagedorn

Unscrupulous behaviour by charity fund-raisers in schools has caused concern among teachers and parents, and has led the Institute of Charity Fund-raising Managers to issue a code of practice.

The code for dealing with schools was described by Mrs Angela Runbold, minister of state for education, as an "entree into respectability" for fund-raising and one which heads would welcome.

The code says that children must be trusted. "There should be no harassment of children, but the child should be on his or her honour to pay in all the money raised."

It also discourages the use of incentives to reward children who raise money. It says that sponsored events should have clearly defined limits so that a maximum amount can be determined in advance by sponsors. Fund-raisers are warned that they should make contact with children only in or near the school and with the prior approval of the head.

Fund-raisers had been known to take collections from children at the school gates after heads had refused to sponsor their charity within the school.

The code also says that children should be cautioned about approaching strangers. The National Society for the Prevention of Cruelty to Children has been doing this since the beginning of term by including specific advice to parents and children in its fund-raising material.

Mr Nick Lowe, chairman of the ICFM committee which drew up the code, said schools were a prime target for fund-raising.

both for raising money and as part of their education programmes. But over the past 10 years, heads had been more selective about charities because of their need to raise their own money.

Two local education authorities - one in the South West and one in Scotland - and some governing bodies had banned fund-raising in schools, he said.

Mr Eric Pilkington, senior assistant secretary of the National Association of Head Teachers, warned that enormous pressure was being put on heads. "The fund-raisers look at the big comprehensive and see a captive audience of around 1,500. Their job is to persuade the head to support their particular charity. Heads fall for it because they are under pressure, and then they come under severe criticism from their PTA or governing body."

Mr Pilkington also felt that a head might be given the impression that a nearby school had raised lots of money, in which case his school would be cast in a poor light if he refused. But raising money made demands on staff time and energy.

Dr John Rae, former headmaster of Westminster School, called much fund-raising "moral blackmail". Parents were being blackmailed through their children, he said, and suggested that no fund-raising should take place in schools unless the idea originated from the pupils.

"The initiative should not come from a member of the staff in need of an ego trip or from the head who needs at least one win in an otherwise unsuccessful season," he said.

Easter leavers who sit exams may lose benefit

Easter leavers who return to sit examinations at the end of the summer term may be prohibited from claiming the supplementary benefit until September.

Regulations published this week proposing the change are accompanied by a Department of Health and Social Security paper which says: "It is important that the benefit arrangements should encourage large numbers of young people to leave their schooling voluntarily."

NEWS

Shelter points to pitfalls on road to independence

by Ian Nash

Britain's largest pressure group for the homeless is urging schools to alert teenagers to the problems of leaving home and living alone.

Shelter estimates that 80,000 young people became homeless last year. A recent survey also revealed that almost half of all young people expect to leave home before reaching the age of 20. Ms Sheila McKee, Shelter director, said at the launch of a schools' resource pack.

Young people wanted independence earlier and their problems were aggravated by rising unemployment, breakdowns in family relationships and the "chronic shortage of affordable rented accommodation". She added that Shelter was particularly concerned about the 13,000 young people who have to leave council care each year without the emotional and financial support of parents.

The schools' pack, which contains a 40-minute video featuring Adam Faith, attempts to give advice in an amusing way. "Our aim is neither to

frighten them into staying at home, nor encourage them to leave," said Ms McKee.

"The important thing is that they are given the opportunity to discuss what leaving home involves and how to cope with any problems they may face."

According to Shelter, 10 per cent of 16 to 19-year-olds do not live at home with their parents.

Some 49 per cent of young people interviewed for the Thompson Committee Review of the Youth Service expected to leave home by the age of 20. It also revealed that 71 per cent expected to find it fairly, or very, difficult to find accommodation when leaving home.

Shelter also found that 36 per cent of all local authorities impose minimum age limits for single people to register on their waiting lists.

The *Moving Away From Home* video resource pack is available from Smith Burdett Video, 10a The Pavement, Clapham Common, London SW4. Price £25, including VAT.

L.e.a.s fail to advise on mergers, says survey

Infant and junior school heads involved in school amalgamations are not getting the advice they need from their local education authorities, a survey has shown.

Research carried out by Mr Alan Perry, head of Whitefield primary school in Plymouth, found that most heads commented: "Not only was there no help from L.e.a.s leading up to amalgamation, but there has been no constructive help since."

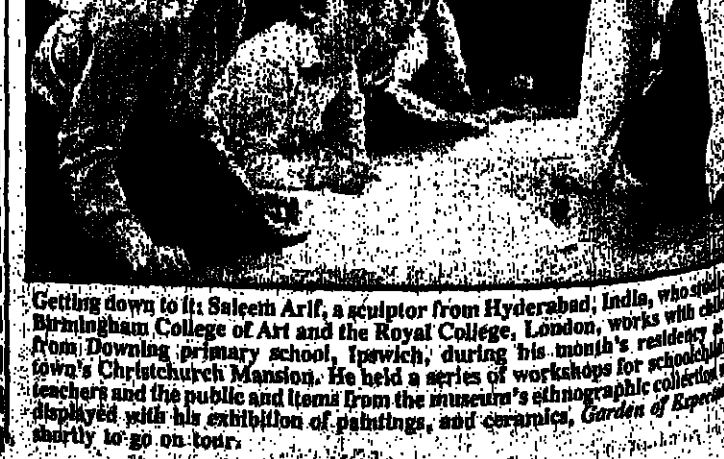
Mr Perry started the research project after his own school underwent an amalgamation. He found there was no written documentation on amalgamations in Cornwall, Devon, Dorset and Somerset and devised his own questionnaire which he took into seven recently amalgamated schools.

All the heads he interviewed were critical of the lack of guidance offered by the L.e.a. and felt amalgamation was implemented on an ad hoc basis.

In the majority of schools there was a marked difference of philosophy between the juniors and infants and satisfactory job descriptions had not been worked out before amalgamation. Promoting the school took on a low priority and only one established programme of visits.

On the positive side, although all seven schools expressed concern about the change in their status before amalgamation, afterwards six of them said they were happy with it.

Mr Perry concluded planning was vital for a successful merger. "Nothing should be left to chance. What happens before amalgamation has a very considerable influence upon the success or failure of the new school."



Getting down to it: Saleem Arif, a sculptor from Hyderabad, India, who studied at Birmingham College of Art and the Royal College, London, works with children from Downing primary school, Ipswich, during his month's residency at the school's Christchurch Mansion. He held a series of workshops for schoolchildren and the public and items from the museum's ethnographic collection were displayed with his exhibition of paintings, and ceramics, *Garden of Experience*, early to go on today.

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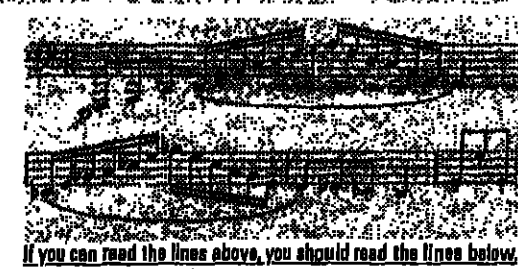
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THE PROFESSIONALS

NEWS



Lady Johnston

Assisted Places exam success

The first pupils to have their entire secondary schooling on the Assisted Places Scheme achieved a 90 per cent pass rate in this summer's A level exams and an 83 per cent pass rate in O levels.

The scheme was designed to allow academically able children from low income families to attend independent schools. Critics claim the scheme has benefited few able working-class pupils from inner city areas. Figures presented to the British Educational Research Association annual meeting this year showed only 9 per cent of assisted places pupils had fathers in working-class occupations. But the Independent Schools Information Service said this week that 60 per cent of last year's 25,000 places went to pupils whose parents had an income of less than £8,000 a year.

Lady Johnston, chairman of the Assisted Places committee, a sub-committee of the Independent Schools Joint Council, said the scheme was "working well".

Bursars scheme aims to ease state heads' burden

Bursars are to be appointed to state schools in Cambridgeshire in a move to transfer the responsibility for the upkeep of buildings from the local education authority.

Comberton village college, near Cambridge, and Hinchbrook comprehensive school in Huntingdon already have bursars and four more are to be allocated to schools that have volunteered to be part of the experimental scheme.

Although the bursars are based in secondary schools, they are responsible for 10 to 15 council properties. At Hinchbrook, for example, the bursar is in charge of six primary and one special school, a community centre and a youth centre.

They have direct control over caretaking, cleaning, the school grounds, and the letting of buildings. They oversee the work of contractors, whose rates will be negotiated annually by the bursar with county hall.

The "maintenance ordering system", as it is called, is co-ordinated by a centralized computer program which prevents overspending.

Mr Colin Grindley, head of Cambridgeshire property department, says the scheme attempts to relieve heads of building problems so that they can concentrate on the curriculum.

Mr Peter Downes, head of Hinchbrook, whose school has a total budget of £1.71 million and is the largest in the county with 1,700 pupils, says that repairs are now carried out more efficiently.

"The scheme's greatest feature is the satisfaction of being in control of one's own ship. You can make decisions that are appropriate to your school."

By next April all six property bursars will be in position and the scheme will be evaluated in 1988. The district auditors have estimated that property bursars could save up to £500,000 a year.

Some Cambridgeshire heads are less optimistic about the local financial management scheme, which will come into effect next April.

According to Mr Alan Atkins, secretary of the Cambridgeshire branch of the National Association of Head Teachers, complaints have been coming in since the scheme was extended to all secondary schools following its trial run.

Heads say that they are not accountants, but teachers. Extra time is needed to liaise with county hall, governing bodies and staff. In some cases, computer print-outs are misleading and make it look as if heads have overspent. Small schools find it difficult to cope with the extra work because they have no extra clerical assistance.

Mr Atkins is also worried that the relationship between heads and their staff may be affected if salaries have to be kept within a certain budget. "This might lead to cuts in staffing levels or posts of responsibility."

Mr Mike Brighouse, a former president of the NAHT, says that the scheme is operating from the wrong base. "It has only been introduced after years of cutbacks which have left the schools suffering from shortages. Heads now bear the brunt rather than officials."

The background to the Cambridgeshire local financial management scheme is given in a booklet launched earlier this week by the Social Democrats.

The scheme, whereby schools are allocated a total budget by the education committee at the beginning of each financial year, will apply to all secondary schools from April 1987. The head and governing body will be responsible for deciding how to spend the school's money.

Julia Hagedorn reports on two Cambridgeshire management strategies to give headteachers greater autonomy

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'Free' choice of GCSE syllabuses costs £3m

by Jeremy Sutcliffe

The Government's decision to give schools a free choice of GCSE syllabuses has cost the exam board £3 million this year, according to the country's top examiners.

Dr Peter Andrews, chairman of the Midlands Regional Examinations Board, claimed the Government's "freedom to choose" policy was "astounding" and its effects would prove "astrous".

"The £3 million is only the beginning," he said. "It encourages us to ponder to clients. We are not a business - we are a service - and if we are going to be on business lines we are not going to be able to continue to guarantee quality we have been used to."

Dr Andrews said the Government's intention was to encourage competition between the five new GCE boards in order to provide choice and ensure efficiency. Instead, it had led to the proliferation of syllabuses - millions of extra copies being printed only to end up in the waste-paper bin.

The need for boards to provide training in other parts of the country for teachers who opted out of their own regional examinations had been particularly costly, he added.

Dr Andrews was speaking at the final conference of the CSE regional examinations boards in Durham last week. Unlike the GCE boards, they have never had to compete for cash dates.

Dr Andrews was one of several speakers at the CSE "wake" in the 16-plus examinations system. He said that more needed to be done to help the bottom 40 per cent of pupils.

"The whole essence of GCSE is that it will enable all young people to achieve what they can achieve. I find it intolerable that anyone can fail because of the needs of a nation which cannot afford to do so."

Mr Giles Radice, Labour's education spokesman, has thrown his weight behind the universities' call for a review of A level examinations.

Mr Radice told the Durham conference that there was now a consensus that A levels had become a "major handicap" to achievement, leading to the "GCSE and the new developments" taking place in higher education.

A level courses taught a limited range of skills leading to a narrow education. They had become "a poor motivator of pupils".

Single-sex maths teaching does not benefit girls in the long run, research methods and attitudes are more important, concludes a study published last week by the Equal Opportunities Commission.

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Sue Surkes spends the night at the House of Commons as MPs give the Education Bill its third and final reading...

Livening up a dull affair with sex

Thank goodness for sex. For without Tuesday night's passionate cries about sexual perversity corrupting the minds of the nation's little ones, the report stage and final Commons reading of the Education Bill could have been a dull affair indeed.

The first few hours of debate resembled a polite, if not exactly timid game of political ping-pong with members of the Opposition and the Tory Right trying to tag last-minute measures on to the Bill. From the latter camp came Mr Michael Forsythe, MP for Stirling, with a proposal to allow governing bodies to apply to the Secretary of State for direct funding for their schools along the lines announced for the new City Technology Colleges.

Mr William Cash, Conservative member for Stafford, sparked off a lengthy discussion with his clause to ensure proper provision for competitive sport.

Onlookers in the public gallery seemed to outnumber the honourable members themselves. Then came the turn of MPs to swell the ranks and up sprang Mr Peter Bruinvels, the diminutive Tory MP for Leicester East, with his proposals to allow parents to withdraw their children from sex education lessons and to have the Secretary of State draw up a list of proscribed sex education books.

Mr Bruinvels served a blistering attack on organizations such as the Family Planning Association which, he said, had "lunched an evil war on marriage and the family". He let loose his wrath on those who exposed schoolchildren to discussions on homosexuality and promiscuity which, in his view, had to be dangerous.

"There is a genuine threat to our children," he cried. Parents had to be allowed to decide.

Mr Bruinvels' proposal on the withdrawal of pupils, which was defeated by 301 votes to 46, did much to amuse members on both sides of the House. At one stage, it looked as if Labour's education spokesman Mr Giles Radice would topple off his bench with laughter.

But there was much serious debate too. Liberal education spokesman Mr Clemment Freud countered that "a child's right to know should override a parent's right to obscure". Labour's Mr Martin Flannery darkly warned the House to beware of bigotry. And Mr Radice expressed his distaste for the "obnoxious interest" in the subject displayed by some Tories at a time when schools were short of books and other resources.

Mrs Angela Rumbold, the new Education Minister charged with piloting the Bill through its final Commons stages, gave a cool and confident account of the Government's position.

(If one can conclude that her fidgeting fingers belied nervousness at the start of the proceedings, one might suggest that she was helped admirably by her junior minister Mr Bob Dunn who dealt with much of the early Despatch Box work and was in so charming a mood that he even described himself as the nicest person he knew.)

Mrs Rumbold said that a statutory right of withdrawal for parents would be "wrong in principle, unworkable in practice and would merely evade

rather than tackle the problems" of unsuitable teaching being imposed on pupils against parental wishes. Sex education was often found across the curriculum in subjects such as biology and home economics, she added. Pupils' education would be seriously harmed if parents had the right to withdraw their children on every occasion that sex education was mentioned.

Sex talk dominated about three hours of debate on the Bill, which is destined to return to the Lords on October 30 before it can receive Royal Assent.

The next thorny issue concerned campus free speech and Mr Clemment Freud's ultimately unsuccessful move to get the Government's proposal to legislate dropped.

Mr Freud did not support no-platform policies but believed it was at the level of individual institutions that the battle had to be fought and won. "The case for legislation has not been proven," he said.

The liveliest contributions seemed to come from MPs who had either been barred from speaking and pelted with eggs themselves or had been closely involved with one of the several recent free speech controversies.

Mr John Carlisle, Tory MP for Luton, who has been denied a university platform on more than one occasion, cited the cases of Mr David Selbourne, the tutor at Ruskin College, Oxford and Professor John Vincent, of Bristol University, both of whom have been boycotted for writing for News International newspapers.

The Government's clause, even if it was inadequate, would send a message to the country and to the universities that "we will not tolerate this kind of behaviour," he said.

The Committee of Vice-Chancellors and Principals took some flak. Mr Michael Stern, Conservative member for Bristol North West, said the committee had never taken a positive stand on the issue.

Mr George Walden, Minister for Higher Education, said the legislation would have the effect of concentrating the minds of vice-chancellors and directors of institutions.

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NEWS

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SCHOOL TO WORK

Ian Nash reports on the last Education for Capability recognition awards

Time to move on, says RSA

The Royal Society of Arts plans to sell in-service teacher training courses to local education authorities in an attempt to counter "academic bias" in the school curriculum.

It is a radical change in RSA policy and signals the start of aggressive marketing for a new phase in its Education for Capability programme - established in 1980 to nurture the creative and practical elements of the curriculum.

Money raised will be ploughed back into the programme to support a permanent team of advisers which the society hopes to set up by 1988. Mr Fred Flower, consultant to Education for Capability and former principal of Kingsway Princeton College of Further Education, insists that the move is "a logical next step" after the awards scheme which gives formal recognition, annually, to projects offering the best examples of productive education.

Education for Capability was the first scheme in almost 20 years seriously to challenge the orthodox academic curriculum. It grew closely alongside the School Curriculum Industry Project (SCIP).

More recently, however, with the money lavished on Industry Year and the Young Enterprise Scheme, Educa-

tion for Capability has been under pressure to extend its remit beyond small school and college departmental projects.

There are no financial rewards for schools that take part in the recognition scheme, but it does give individuals the chance of a greater influence over national ideas to reform the school curriculum.

Mr Flower believes the small project programme has now fulfilled its purpose. "We are hoping to provide a service that people are able to pay for - like a consultancy service. The more this movement becomes part of i.e.a. thinking, the more we shall do."

He is concerned, however, that the scheme is not dragged into the political arena.

Education for Capability has already carried out small-scale in-service training programmes in a number of i.e.a.s, including Buckinghamshire where a two-day workshop was held using case studies, based on the work of SCIP.

One area where the RSA sees a definite opening is in supporting the practical demands of the GCSE which was strongly influenced by Education for Capability when the courses were devised.

Recognition Day awards have been



Food for thought: Neil Kinnoch samples the fare at the recognition awards

an integral part of the programme since it started, said Professor John Ashworth, Vice Chancellor of Salford University.

But this year was the last, he added. "Now is the moment we switch from awareness to motivation." There will be an annual event to help networks of teachers to keep in touch with the latest developments.

The cost of consultancy services and

in-service training support to schools and colleges is likely to be far in excess of the current annual budget of about £70,000.

● The Education for Capability scheme won praise from Mr Neil Kinnoch, Labour leader, as potentially more significant than either the GCSE or the Technical and Vocational Education Initiative.

The official list of recognition

Sutton High School (see below) was one of eight schools granted "recognition" under the scheme this year. There are the others.

Queen Elizabeth's Foundation for the Disabled, in Surrey, offered a curriculum rare among such schools in its scope and the rigorous way it prepared students for independent living.

The nursery class at Hummer primary school, Redcar, was praised for its ability to encourage pre-school children to "take responsibility for their own learning".

Professors were high on the list of achievements this year, with a challenge going to West Yorkshire's Cleethorpe high school for its "imaginative response to the needs of lower ability students of varied ability".

Three students from Wales have set up their own small business as follows the Graduate Enterprise Programme at St David's College, University of Wales. It was noted for its ability to turn students' academic knowledge into successful business initiatives.

For the business-minded also, management starts in the college at Not East London Polytechnic where students take a graduate diploma in Management by Self-managed Learning.

A second chance for the unemployed is offered at the Drop-In Skills Centre, Nelson and Colne College in Lancashire.

In Leicestershire, Hamilton School was praised for its highly original "Sixth Option" aimed at giving students greater confidence when pursuing work.

design a curriculum to encourage the three Rs but the four Cs - competence, creativity, co-operation and the ability to cope.

Now more than half of all secondary fifth-year pupils, supported by 11 teachers, are involved in a combination of courses, drawn from the TVE and City and Guilds Institute of London, for up to 16 periods a week.

As the three pupils at the RSA day described their favourite aspects of the work, it soon became clear that they had been drawn into ventures that the normal curriculum would never have offered. That is why the school project was called "The alternative curriculum".

Work ranged from the art of soapcraft to designing a perfume guide for the blind and teaching young children to read.

"To be honest, I didn't like to call the alternative curriculum but I had to have a label," said Mr Edwards. "Alternative always implies something for the lowest ability pupils and often they are the only ones at whom these courses are aimed."

He sees it not so much as the alternative curriculum as an alternative route to the same goals. "Anything is to be any good then it must be for all the pupils."

That is what it is fast becoming at Mr Edwards' school. And, after all, it has been said that what his classes at Sutton high school try today...

Jeremy Sutcliffe looks at a booklet showing parents how to fight school closures

Machiavelli suspected at work in county hall

A picture of the local councillor as Machiavelli is vividly - if somewhat one-sidedly - created in a new booklet designed for parents campaigning to save their village school.

It chronicles the fortunes of two Wiltshire schools, a primary in the village of Easton Royal and Oakfield comprehensive in Swindon. Both were threatened with closure on grounds of viability, but the comprehensive was eventually reprieved.

Why? Oakfield is in a ward represented by a Labour councillor, and the ruling Alliance group on Wiltshire County Council is sustained in power only with Labour support. The local councillor representing Easton Royal is a Conservative.

Such a conspiracy theory does not,

annual intake. Savings from the closure of Easton Royal are put at £11,000 a year, compared with £20,000 a year for Oakfield.

The booklet warns parents that a small school's chances of survival depend crucially on local politics. If the local councillor is in the party in power in county hall, or if the local seat is marginal, then any campaign has a good chance.

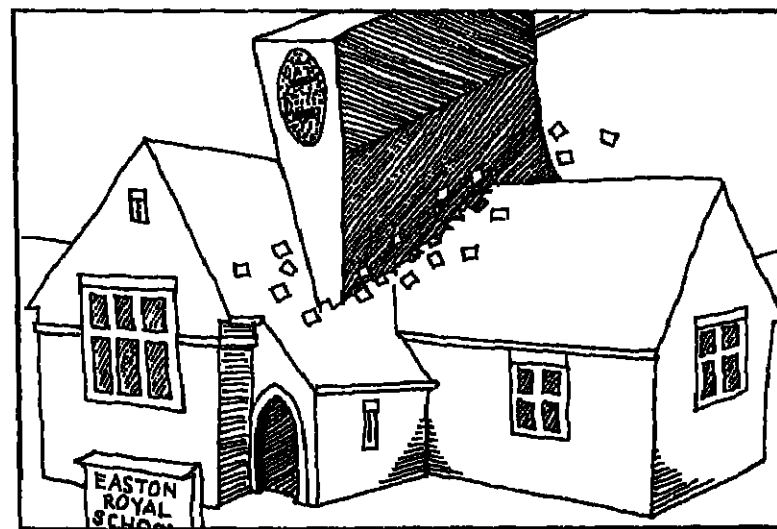
The *Conspiracy Against Village Schools*, as the booklet is called, was researched and written by parents campaigning to save Easton Royal school, currently the subject of an appeal against closure to the Secretary of State.

The booklet draws together all the available arguments and research sup-

porting the educational case for small schools and counters the arguments against.

It claims village school children have a more positive attitude to their school, work and teachers, and find small schools less traumatic than large ones.

The *Conspiracy Against Village Schools* is available from the National Confederation of Parent-Teacher Associations and the National Association for the Support of Small Schools.



Black people struggle for credibility

by Diane Spencer

Black people working in institutions dominated by white middle-class men have no authority or credibility, a conference in Bradford was told.

Mr Akram Khan-Cheema, adviser on multicultural education in Bradford, said he liked to kid himself that he was in a powerful position, and effective. Yet everyday he struggled to gain the kind of credibility which was automatically given to a white adviser.

At meetings, colleagues with whom he got on well listened but then moved on the next item on the agenda without taking action.

Mr Khan-Cheema, a former member of the Swann committee, was addressing a conference organized by the National Anti-Racist Movement in Education.

He said most of his colleagues wanted to be fair, but they didn't understand the meaning of oppression. "They want to define what is best for us, our education and quality of life."

If people accepted the definition of racism as prejudice plus power, then race awareness training was not enough.

Initiative on Japanese

The first national conference on the expansion of Japanese language teaching in secondary schools includes discussion on the development of a GCSE syllabus and sixth-form language course.

About 50 teachers, inspectors and administrators are expected to attend the workshop-based meeting in Manchester which will feature lecturers in Japanese from the universities of Sheffield, London and Stirling and a second secretary from the Japanese Embassy.

The initiative reflects a growing interest in the teaching of the Japanese language. School courses have already begun in Manchester, Tameside and Suffolk, with pupils at Manchester Grammar School, where the conference is to be held, have been able to take an O level in Japanese as part of a sixth-form general studies option for some time.

It is hoped an informal group will be set up to offer Japanese as part of a broader modern languages approach in Britain, and to improve standards of materials and assessment.

The conference, on Thursday, October 30, forms part of a series of workshops run by the Japanese Embassy's information centre over the past 10 years with the support of schools and local education authorities.

How one school found the alternative route

Mr David Edwards is quietly confident that what his classes at Sutton High School, St Helens, try today, the rest of the educational world will be clamouring for tomorrow.

His evidence for this bold claim is the Hatgroves Report on reorganization of inner London schools and the specification for the Technical and Vocational Education Initiative. "Very good guidelines - but we thought of them first."

In fairness, he does accept that there are national trends in educational thinking. But as he told the Royal Society of Arts in London last week: "It is very encouraging to read our methodology in official documents with far better language than we could muster."

Loftier the official language may be, but Mr Edwards and his three pupils - Darrell, Anthony and Michael - could take more credit than any government report when they went to receive their award at the Education for Capability Recognition Day.

The award was no more than the name of the day suggests - recognition - but in the case of the Lancashire comprehensive pupils and staff, it provided motivation to break new ground in the school curriculum.

The pupils have developed an impressive range of capabilities through community-based activities while pursuing two objectives for self-improvement: reliability and co-operation. They have been teachers of reading



Words galore: David Edwards works on a talking newspaper with pupils David Joplin, Sandra Boardman and Scott Allen

in four junior schools, and have worked with the fire brigade and the police, the blind, a local environmental organization, local firms, employment offices and travel agents.

Sutton high school was born a comprehensive school four years ago,

in the age of "relevant" education. It quickly built up a good academic tradition, but the staff soon realized that this was not enough.

It was apparent that the traditional curriculum was inadequate and not preparing pupils for adult life. In many

cases, it totally failed to motivate them. Staff knew what they wanted to achieve but no mechanism was on hand to put ideas into practice.

Then Mr Edwards learned of the RSA Education for Capability scheme which was looking to help people

Employers and unions back FEU

Organizations representing most of Britain's employers and trade unionists are demanding the retention of the threatened Further Education Unit.

The Confederation of British Industry and the Trades Union Congress have rejected four options put forward by the Department of Education and Science: a slimmed-down FEU, amalgamation with the Further Education Staff College or a merger with either the National Council for Vocational Qualifications or one of the curriculum bodies.

The Trades Union Congress believes that no changes should be made without a complete review of all bodies in

the sector. "We are not opposed to some kind of review," a spokeswoman said. "But it is ridiculous to pick on the FEU and say its activities alone should be changed."

It described the FEU as an invaluable source of information and advice on adult education, schools-industry links and multi-ethnic education.

This week, too, the Manpower Services Commission decided to throw its weight behind supporting the continued independence of the FEU.

● Demands for new assessment methods in colleges will speed the support of a formidable staff training

programme, says an FEU report.

It also says that the requirements of the National Council for Vocational Qualifications will have major repercussions on assessment and testing in many schools and sixth-form colleges.

"Teachers will be required to explain to pupils and parents how the different academic and vocational examinations relate to one another. They will also need training to adapt to the new methods of assessment and testing," said Mr Jack Mansell, FEU chief executive.

● School examinations should have been included in the Review of Vocational Qualifications

Why education and industry should be close but not cosy

Large sections of British industry regard education and training for their staff as "at best a trill, at worst a waste of time or money", Baroness Seear told a personnel managers' conference this week.

Speaking at the Institute of Personnel Managers' conference in Harrogate, Lady Seear, Liberal Member of the House of Lords and employment spokeswoman, said: "Of course there are many industrialists who have put a great deal of time and money into training and retraining, have encouraged day-time release, and even - here

and there - sabbaticals.

"But taken as a whole such activities have a low priority in comparison with the emphasis given by our companies."

She said that schools and industry should have a close, but never cosy, relationship. "There will be times when educators and employers are in creative clash. And it is better that there were too much agreement than too little. A long run both would be poorer. What the tension stimulates, the creativity

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THE TIMES

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NEWS

A school which was once the largest in the country is facing reorganization – Virginia Makins looks at how it is coping.

Banbury bears the cross of falling rolls

Banbury school, once Britain's biggest and best-known comprehensive, is facing major reorganization because of falling rolls.

The system that fitted 2,800 pupils and 145 teachers no longer works for a roll that now stands at 1,830 and will go down to about 1,600 by the end of this decade.

Banbury opened in the late 1960s, and was planned to make the most of the fact that three different schools – two secondary moderns and a grammar – were within easy walking distance of each other. A fourth school, originally in the Banbury plan, was later developed into a freestanding 11 to 16 comprehensive.

The federal organization planned by the first principal, Dr Harry Judge, for the large complex, rapidly became famous. It is still in place, but will be transformed next September. The Judge plan drew a line between "conscripts" and "volunteers".

The conscripts – then 11 to 15-year-olds – were divided into four (later three) "halls", with separate identities. The volunteers – 15 to 19-year-olds – went into a purpose-built upper school. But when the school-leaving age went up to 16, the odd switch at 15 became even odder. There has been plenty of discussion over the years

about how to change it, but there were also arguments in favour of the status quo while numbers were high.

Last term, a large staff working party looked at the possible options for making sense of the falling roll. One was to have three 11 to 16 halls. The other was to have two separate groups of first to third years, and then a group of all fourth and fifth years.

Both plans included a distinct sixth-form centre – something that parents, many teachers, and sixth-formers, particularly those coming in from three other 11 to 16 schools, had wanted for years.

Somewhat to the surprise of many staff, the working party recommended the second option and, after a day's discussion by all the staff, that was recommended to the governors this term. The governing body decided to go ahead with the plan, starting next September.

Logistics were one reason for the choice. One problem with the old system was that Banbury has the capacity for one school, but had to divide resources between four separate bases.

Another was that, as numbers shrink, the intention that each hall should have its own teachers for all the



Anita Higham: facing the challenge of the numbers game

main subjects had become impossible to arrange in practice. Pupils and teachers were spending much too much time migrating round the campus for different lessons. Dividing the school into three-form-entry 11 to 16 halls did not really address these problems.

But perhaps the most important reason for the decision was that the three-tier option opened up the greatest possibilities for curriculum change.

It allowed both a secure base for the younger students, with concentration on their curriculum needs, and a concerted effort to meet the requirements of the 14 to 16-year-olds at a time when there are so many changes in what is seen as an appropriate curriculum for them.

It all adds up to a traumatic change

for the staff at the school. Many jobs will have to be redefined, and all aspects of the school are under discussion.

Some teachers are particularly apprehensive about the thought of more than 400 fourth and fifth years in a separate group.

But many of the staff saw it as a welcome chance for the school to use falling rolls to bring about desirable changes in curriculum and pastoral systems.

Mrs Anita Higham, who took over as principal two years ago said: "We're lucky – with a falling roll we're still big enough to have an incredibly exciting opportunity to develop." She is determined that the logic of numbers, and the challenge of the new demands on secondary schools, should be squarely faced at Banbury.

IN BRIEF

Court plea for IRA man

A defence lawyer at Belfast Crown Court last week pleaded for leniency for a youth who, at 13, was said to have been recruited into the IRA just before a woman teacher at his school at Lisnakea, County Fermanagh, Paul Fitzgerald Smyth, now 19, pleaded guilty to possessing two rifles used in the murder of an Ulster Defence Regiment soldier five years ago. Imposing a seven-year sentence, Mr Justice Carswell said he had taken into consideration that the youth had been brought into terrorist activity by a person of influence.

Women admitted

Cambridge University's last male-only institution, Magdalene College, has voted to admit women students. The all-male college founded in 1542 is likely to open its doors to women in October 1988, assuming the decision is approved by the university senate.

11-plus protest

As a protest against the 11-plus in the present form, the Irish National Teachers' Organization in Northern Ireland refused to co-operate in the conduct of the tests last week.

Some 400 unemployed and retired teachers were brought in by the Education Board to cover both sessions.

Larkin appeal

The University of Hull has launched "Philip Larkin Memorial Appeal Fund". The fund will be used to buy modern literary manuscripts for the library throughout Great Britain and establish a room in the library at Hull named after the poet, which will house his collection of books and papers.

Donations to the Appeal should be sent to: Mr C. Bloomfield, The Secretary, Philip Larkin Memorial Appeal Fund, 14 Store Street, London WC1E 7DG, or to National Westminster Bank, Bloomsbury Branch, 140 High Holborn, London WC1V 7PL.

Parent link

A training pack for teachers who involve parents and other professionals in their activities has been produced by the National Children's Bureau. It is the first training material available to pre-school workers on how to develop the new skills needed when working with other adults.

Working with parents: a training source pack, 26.50, National Children's Bureau, 8 Wakley Street, London EC1V 7QE.

New nursery

A 25-place nursery class is being added to New End primary school in Hampstead, London. The nursery will cost £77,000 and is part of the continued expansion of the school.

Picture push

Schools are being encouraged to look behind darkroom doors by the Association of Photographic Laboratories. Visits can be arranged through the APL office at 9 Warwick Court, Gray's Inn Road, London WC1R 5SL, telephone 01-405 2762.

Youth probe

Part of a major 40-year-old investigation into the youth service in the West Midlands, titled 80,000 Adolescents, will be reprinted by the National Youth Bureau next month. The research work on the purpose of the youth service, carried out in 1946 by staff and students of West Hill College, Birmingham, will be of value to people concerned in youth work education today, says the NYB.

Computer quiz

Secondary schools throughout North-West are hoping to win a master computer in British Telecom's Indus computer competition designed to give pupils insight into modern computing. All schools in the competition will receive a software package.

NEWS



Left: the flashing 'butterfly' that awakened Rachel... now she wears earphones to amplify the sounds around her, especially those of her own breathing



Sue Surkes reports from a special school in Rotherham which is pioneering a breakthrough in treatment for the severely handicapped.

The butterfly that coaxed Rachel into a wider world

Rachel was born with severe mental retardation, developed features of autism, and was diagnosed as being cortically blind. While her eyes and ears were all right, her brain seemed unable to pick up and transmit messages.

Day in and day out, she would sit cross-legged on the floor at Maltby's Hilltop special school, near Rotherham, South Yorkshire, with her head immobile and a fixed stare. Cut off from her environment, she would touch nothing but herself.

Now, thanks to a revolutionary programme of visual, aural and tactile stimulation, she sees and listens. She moves her eyes and head to follow objects and sounds, and can discriminate between food and a beaker of milk.

Johnny, another of the five full-time pupils at Hilltop's special unit for the profoundly mentally and physically handicapped, was also diagnosed as cortically blind. He is severely brain-damaged and a spastic quadriplegic – with virtually no control over his limbs.

Unlike Rachel, he has never been able to demonstrate in any conventional way whether he can see, hear or feel. But results from a biofeedback system designed last year show indicate that he does respond to external stimuli.

These exciting results come from the work of Mr Alan Bickerstaffe, an electrical engineer turned teacher. The School Curriculum Development Committee has provided some funding and he is said to be impressed with the work so far. Recent visitors have included HM Inspectors and local education authority advisers.

Mr Bickerstaffe has just been offered a second teacher fellowship at Sheffield University. And the requests for him to address conferences and participate in working parties are starting to trickle in.

To walk into his classroom is to enter a high-tech Aladdin's cave. The computers, many donated by manufacturers, range from sophisticated keyboard set-ups for musical composition to a micro-chip device that buzzes when Johnny wets himself.

Mr Bickerstaffe's brainwaves developed from a simple idea. When he joined the school five years ago, he decided to devise a set of musical cues to help the children anticipate an activity – lunch for example. But he began to wonder whether the children could discriminate between different sounds and, if not, whether they could be taught.

Pursuing this line, he developed a series of computerized musical scales which could be played to the children at different frequencies or transmitted as sound to vibrate through a special bed. He dubbed this technique aural stimulation and made it the touchstone of the complete aural, tactile and visual stimulation system that he is now busy trying to develop.

The system has benefited 13-year-old Rachel most dramatically. Mr Bickerstaffe stood her in front of a computer screen with a flashing butterfly every day in an attempt to encourage her visual cortex to respond

to stimuli. Within six months, Rachel's eyes were moving.

The next step involved a tracking device that moved the butterfly across the screen at intervals. In time, Rachel's eyes followed the image.

During the same period, her listening skills were developed with the help of aural feedback. She was given earphones that amplified all the sounds going on around her, especially those of her own breathing. Her initial response was to make clicking sounds herself. Now, less vocal, she concentrates on listening.

The most encouraging spin-off of the simulated stimulation is that she will now look and listen when the equipment is taken away. "Rachel is

now interacting with her environment – which she was not doing before when she sat on the floor," Mr Bickerstaffe said. "She is looking and listening for the first time in her life."

The system has numerous permutations. An apparently deaf child can receive sounds as vibrations. Vocalization can be translated into a picture. The aim of encouraging vocalization is not to develop speech but to get children to use their lungs.

Mr Bickerstaffe is now aiming at a more fully integrated system that will more closely resemble the real world by, for example, linking moving visuals with moving sounds.

He is also keen to emphasize interaction so that children such as

Rachel could switch off visuals by making sounds and could thus learn to use and control their own skills.

The stimulation programme seems impressive – but its effectiveness on a child as profoundly handicapped as Johnny is impossible to gauge by observation alone. Enter biofeedback.

This technique uses the equipment most commonly associated with lie detectors. Small tapes are attached to the fingers, stimuli are given, and the changes in skin electrical conductivity are recorded by a line that blips up and down on a computerized graph.

Such graphs have provided the first indication that Johnny, aged 14, can respond to pictures and movement, although it is not clear whether any cognition is involved. They also seem to show levels of pain – the line shoots off the screen if Johnny's limbs are wrongly positioned – and responses to his stomach being tickled.

Such information could be immensely valuable if linked to the system's apparent ability to signal when Johnny is about to have an epileptic fit.

Mr Bickerstaffe believes that, by providing the right stimulus at the right time, he may be able to reduce the frequency of the fits or even halt them altogether.

"Biofeedback enables me to tailor the stimulation more precisely to the individual child," Mr Bickerstaffe said. "It has given me, as a teacher, a tool with which to test the things I have been doing for years. Until now, I didn't know whether they worked."

Nine-year-old Robert will be the second pupil to go on biofeedback. He is severely mentally retarded and has such bad muscle control and so little voluntary movement that he cannot suck his thumb. But his response to visual stimuli is said to have been encouraging enough to merit further testing.

Mr Bickerstaffe is enthusiastic about the benefits other special schools could reap from the relatively inexpensive biofeedback equipment. And he believes that the system could, in theory, be adapted for ordinary schools to test, for example, the difference between understanding and learning by rote.

Mr John Hill, the headmaster of Hilltop, is fully behind Mr Bickerstaffe's work but was at pains to stress that high-tech should not replace "traditional good practice". Children still underwent a programme of physical care and exposure to real, as opposed to simulated, experiences.

"I feel that the greatest value of such developments in an educational setting is the opportunity for profoundly handicapped children to interact with their environment, especially because as a group they are traditionally on the receiving end of things," said Mr Hill.

But he emphasized: "What may be seen as the monitoring aspects of this work cross over the frontier into the medical field. We know the children respond to stimuli, but we do not know what the responses mean. These will need further medical validation – and that is being sought."

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Michael Heseltine: talk cancelled

Speech ban 'an abuse of power'

Former Cabinet Minister Mr Michael Heseltine has accused Derbyshire County Council of an "abuse of power" after he was prevented from speaking to sixth-formers last week.

The Labour-controlled council cancelled the Tory MP's visit to Mortimer Wilson School, Alfreton, last week less than 24 hours before it was due.

Mr David Bookbinder, leader of the council, said that the school had invited Mr Heseltine without the authorization of the governors, who had learned of the visit less than two days in advance.

"The procedure for consultation between the school and the governing body is quite clearly laid down and it seems that in this case it was not followed. The school governors had no opportunity to consider the suitability of the proposed visit and therefore the decision was taken to cancel it."

Mr Heseltine said: "The cancellation of my visit, originally at the invitation of teachers in the school, is a classic example of socialism in practice."

"What is supposed to be a free society in which people listen to all sides of the question and make up their own minds becomes a society in which only the views of the left are allowed to be heard."

Sue Surkes on the Joint Matriculation Board's annual conference with the teachers' associations.

The writing on the wall

Final touches are being put to a new writing skills assessment scheme that could be offered to schools and colleges before the end of this academic year.

As part of a broader staged assessment in literacy package which will eventually include reading skills, it is being developed at the University of Manchester's department of education, with the support of the Joint Matriculation Board.

In a linked development, the JMB is also backing research into an assessment in numeracy scheme by the University of Nottingham's Shell Centre for mathematical education. That is expected to be launched next September.

The writing scheme, aimed primarily at the 13 to 16 age group, would provide challenges at several ability levels from straightforward narrations

to the kinds of analytical styles expected at GCSE.

It is intended to cater for the skills required in 13 curricula areas from CDT and geography field work to history.

Externally set and marked writing tasks will be made available three times a year, according to Mr Tom Christie, the project's director.

Youngsters will be given record books and sets of objectives outlining the kind of requirements they are likely to come across. When ready to be assessed, they will be given three weeks' notice of the topic. They will be able to take subject material into the test to be adapted, according to the tasks that are set.

The scheme, which has so far involved trial marking exercises on material collected from schools, will have a broad appeal, Mr Christie said.

It could be used by middle schools who wanted to pass on literacy records to other schools. It could benefit adults returning to education. And plans were afoot to link it to the needs of GCSE candidates.

The assessment in numeracy projects, currently being piloted in 54 schools, will aim to assess pupils' understanding and use of mathematical techniques in every-day life.

It will comprise four modules and will come complete with assessment and teaching materials. Modules produced in trial form include one on designing a board game and another on planning a trip.

It is hoped that both the literacy and numeracy schemes will eventually contribute to the records of achievement currently being developed by the northern partnership of examination boards and local authorities.

Post-16 grades call

GCE boards should set the wheels in motion to standardize academic and vocational examination grading systems at post-16, Dr Ros Bradbury, chairman of the JMB examination council, said.

Standardization had been achieved with GCSE. It would be easier at post-16 because of the relative lack of centrally laid down criteria.

Some syllabuses had been successfully produced as a result of co-operation between the Northern Examining Association and groups associated with TVEI. "At post-16, the GCE group might see how it can incorporate more explicitly vocationally orientated elements into a future syllabus development programme."

Dr Bradbury's contribution to the conference focused on the new advanced supplementary (AS) level which

is roughly equivalent to half an A level and is due to be examined for the first time in 1989. The examination had to be seen in the context of the educational changes going on. "Already GCSE criteria have allowed for the development of double subjects and modular syllabuses. How much more feasible this might be with AS levels where, at present, we have no detailed criteria to constrain us."

Dr Bradbury said she was concerned about the existence of AS levels alongside GCSE for mature students. She said later that provision should have been made for a single qualification between 16-plus and A level which would have been broader than the AS level and would have been just as useful to those students who did not want to take A levels or CPE as those who did want to take A levels.

DES warned over profiles introduction

Some schools may not be ready for the planned 1990 introduction of a nationwide scheme for introducing pupils' records of achievement, Dr Alan Spencer, a senior JMB research associate, told the conference. He warned the Department of Education and Science to tread carefully around the deadline.

He added that it was not clear who would be made responsible for introducing records of achievement nationwide in 1990. "I would be concerned if it were to be mandatory on all schools," he said. "I would feel better if it was phased in two places where it was felt things would be done properly."

Children's charter faces more delays

New attempts to draft a European convention of children's rights came under attack from international children's organizations at a recent meeting in Strasbourg, hosted by the Council of Europe's Directorate of Human Rights.

During 1979 - the International Year of the Child - a proposal for a European charter on the rights of the child was discussed by the parliamentary assembly of the Council, but no further action was taken.

Last April, representatives from non-governmental organizations decided to make a new start. M. René Lejeune, a former senior official with the International Union of Child Welfare, produced a first draft in Strasbourg, Geneva and Paris and a plenary

meeting was held at the end of September.

The Geneva sub-group, represented in Strasbourg by Mme Marie-Françoise Lucker-Babel from Defence for Children International, declared bluntly that the draft was not a suitable basis for discussion, being a mixture of moral tract and legal instrument, not progressive, possibly even retrograde, and with grave omissions.

She pointed out there were no provisions against discrimination, or to protect children in time of war or national catastrophe.

Defence for Children International proposed that, before a draft could be agreed, there should be extensive preparatory work: to research the protection already provided for chil-

EEC

Peter Newell traces the slow progress towards a European convention of children's rights

children under existing Council of Europe conventions, and, second, to study comparative legislation affecting their rights in member states.

The DCI is also co-ordinating the drafting of the new United Nations convention of the rights of the child, and has learned from that experience that detailed preparatory work and the involvement of international lawyers is

vital for progress.

It believes that work on a European convention should wait until the UN document is finalized.

One article in M. Lejeune's controversial draft implies a right to life from conception rather than birth - guaranteeing no unanimity between organizations with varying views on women's rights to abortion.

The provisions on education had a distinctly old-fashioned ring, emphasizing parents', rather than children's rights.

"The education of the child is primarily the responsibility of the parents, with both mother and father having equal rights... The State shall provide free education and vocational training, but shall not claim a monop-

oly, favouring pluralistic schools compatible with the history, traditions and culture of that state."

Only one article in the text proposed limited rights to self-determination to exercise in a responsible manner autonomy and assume his responsibilities in preparation for his future role as an adult. Member states must facilitate the emancipation of an autonomous young person, through appropriate legislative measures. However, sub-groups argued that this should be deleted.

A further meeting is to be held in Strasbourg, at the end of January, to attempt to reach agreement on a next stage of what seems likely to be a very lengthy process.

A vicious circle that entraps the Polynesians

New Zealand's teachers have been getting a roaring lately. They are used to business people making the almost obligatory annual moans about the quality of school-leavers' spelling and arithmetic - but recent salvos have hit them in quick succession.

A group of Maori parents who have been refusing to send their children to school because they believe it has a bad effect on them recently enlisted the help of a linguist, Dr Richard Benton.

As Dr Benton, who works for the New Zealand Council for Educational Research, began putting together some evidence on how schools change bilingual pre-schoolers into monolingual infants, he uncovered even more evidence of the harmful effects of schooling.

In his opinion, teachers treat Polynesians the same way they treat pupils with low ability. They usually do this unthinkingly, but nevertheless they do it.

Dr Benton explained the long-term effects: "You get into a kind of vicious circle where the teacher doesn't get through, the child doesn't learn, and then of course this repeats itself."

"Both sides in a sense take up a fixed position in the end, the teachers believing the children can't learn and the children themselves very often believing they can't learn either."

Dr Colin Knight, the principal of Christchurch teachers' college, had previously exposed the inability of his own students to spell, write a grammatical sentence, add, and get their facts right.

He told a conference of educational administrators: "There are teachers who are every day generating anger and frustration among pupils that will

NEW ZEALAND

Teachers are under attack for failing ethnic minority pupils. Report by Lynn Richards

eventually lead to violence." By not giving pupils a sense of purpose and achievement, "teachers do create criminals. They can create geniuses. Society has the choice of how its resources should be used."

The country's police association has recently asked for 1,000 new personnel but Dr Knight says more could be done to stop crime by training teachers. He advocates an afternoon week for in-service "routine maintenance" and chances for general study leave for "periodic refitting."

Keeping up the pressure, the Reverend Maori Marsden, an Auckland Anglican social worker, gave evidence to a ministerial committee of inquiry into violence.

He said that the schools must shoulder much of the blame for the numbers of young gangs on the streets. "Out there are hundreds of our children who have been tagged failures by the school system."

"If it continues its course, then by the year 2025, I think, the system will have spawned a race of Maori illiterates. I have had to teach them to read. It was quite simple to teach them to read too. But I had first of all to cure their minds of despair. Eminent people breed despair, an encounter with nothingness."

The teacher unions have not replied; there is a general feeling that the truth is pretty close to the rhetoric.



Information campaign to break "wall of silence"

New funds for drug war

FRANCE

The French education minister, Mme Allot-Marie, is to launch an anti-drug information campaign in schools.

She is determined to break through what she sees as a wall of silence surrounding drug abuse. "Schools seem never to have heard about it. They seem to be the only place where drugs are never mentioned."

Teachers, school nurses and doctors are often ill-informed and either unable or unwilling to intervene when they see children at risk. Mme Allot-Marie wants them to play a more active part in warning pupils about the dangers of drugs, alcohol, solvents and other addictive products.

She also hopes the Fr 15.5 million (£1.6 million) campaign will get her message through to 14 million pupils

and university students. Mme Allot-Marie is anxious to include information on AIDS and to give more protection against petty crime and violence. The size of the problem is not yet known, but she stresses it is less acute than in America and some European countries.

Efforts will be initially concentrated on badly-affected schools in areas in and around Paris, Versailles, Lille, Lyon, Aix-en-Provence, Marseille and Nice.

Mme Allot-Marie is expected to take stock of the recent British experience, which highlighted the potential dangers of information campaigns for young people which might make drug experimentation attractive.

The French campaign was announced at the same time as new measures to deal with adult drug abuse. Mary Follain

Protesters unite over job cuts

BELGIUM

Schoolteachers and university students staged demonstrations in Brussels last week in protest over job cuts and increases imposed by Belgium's ruling coalition government.

An estimated 15,000 teachers, parents and union officials took to the streets last Wednesday against education cuts of 21 billion francs (about £350 million) in an unemployment drive for this linguistic and politically divided country.

They came from both Dutch-speaking Flanders and French-speaking Wallonia, and were united by the fact that the fragile government of Prime Minister Wilfried Martens was under threat from the crisis caused by the French-speaking Flemish mayor who would not speak Dutch.

They declared that no matter what the political situation, they would defend their objectives of safeguarding jobs, respecting statutory rights and maintaining the quality of education. "The following day between 2,000 and 4,000 university students met in disapproval of the higher education cuts."

Their main protest was against the raising of fees, formerly fixed by the government at a maximum of 100 francs (about £183). These are now set by the universities. Although fees of the francophone sector have been increased more steeply than those of the Dutch, most demonstrators were Flemish.

Mr Jose Happart, the French-speaking mayor of the prosperous commune of Les Fournies, was criticised for refusing to take an anti-Dutch line.

Les Fournies is at the centre of the perpetual language crisis in Belgium which was linguistically partitioned in the early 1960s. Although the official language in that area is Dutch, the majority of the inhabitants are francophones. Jane Marshall

Professors rally support against textbook curb

UNITED STATES

Bill Norris on the latest round in the fight against censorship in schools

The fight to prevent the censorship of America's school textbooks is intensifying. The latest group to enter the fray are university professors, worried that students will lack the ability to think critically and will develop a tolerance for the repression of ideas.

The American Association of University Professors has issued a report urging members to fight censorship in public schools and to preserve their academic freedom.

Such intervention by a higher education group in the affairs of schools is highly unusual. It has been prompted, says the report, by the realization of the direct effect of censorship on universities and colleges.

"Resistance to censorship in schools cannot be left only to those who are its victims," said Robert O'Neill, chairman of the AAUP's commission on academic freedom and pre-college education. "Restrictions on free inquiry and learning must be of concern to educators at all levels."

The commission was established last year, in response to fears of a growing

effort to stop governors and teachers using controversial materials. It found that while much of the pressure for censorship came from religious fundamentalists and those with conservative political views, it was by no means limited to these groups. Members of minorities and women's associations were also influential.

The report urged university teachers to review materials and provide a professional opinion on them; support public sector teachers; and serve on governing bodies. It said the most crucial role was to instil "a lifelong passion for intellectual liberty".

Currently, that liberty is being challenged in a courtroom in Mobile, Alabama, where a trial began last week to decide whether local schools

should use textbooks that allegedly promote "secular humanism" and exclude Christianity.

Six hundred parents are suing the state board of school commissioners, citing 48 of the 4,000 books used in the state's schools.

Though the case is confined to Alabama, it has the potential to affect schools throughout the United States and has attracted wide interest.

The crux of the argument hinges on whether secular humanism can be regarded as a form of religion. The fundamentalists claim that it is, and that the schools are in breach of the Constitution in teaching it. Early rulings by the judge indicate that they may be winning the point.

Whatever happens in Mobile, the case is unlikely to end there. Powerful, well-funded interests are involved on both sides, and it seems certain that the Supreme Court will ultimately have to decide the issue. With the new composition of that court, the opponents of censorship may have good cause to worry.



The Government believes that army officers would make excellent schoolteachers

Lead poison flushed out of water system

The schools are alive with the sound of toilets in the state of Maryland.

This is not due to a sudden outbreak of incontinence, or a sales drive on the part of soft drink manufacturers. It is an attempt to protect pupils from something even more insidious: lead poisoning in the drinking water.

Lead is known to cause learning and behaviour disorders and to retard growth.

The scare began some months ago, when owners of new houses found excess levels of lead in the water. Because of the susceptibility of children to lead poisoning, an immediate check was made on school plumbing, and more than a third of schools tested were found to have the problem.

The lead is believed to come from soldered joints in plumbing installed less than four years ago. After this time a natural plating builds up inside the pipes.

Because the problem is worse if water is allowed to stay in the system, water fountains are left turned on, and toilets flushed constantly. The children are given bottled water which costs some school districts about £1,750 (£1,200) a week.

So far the programme seems to be



Lead danger to water supply

successful, with lower lead levels recorded.

The problem is unlikely to be confined to Maryland. The Environmental Protection Agency announced last month that it was banning the use of lead in the installation and repair of all public drinking water systems and schools across the country will be checking their supplies.

"The sound of the cistern," said one observer, "will be heard in the land."

Scrambled software on the menu

Computerized education may soon be available to rural schools across North America cheaper than ever before, thanks to a revolutionary development in software distribution.

The key to the scheme, which has already been taken up by 17 states and five Canadian provinces, lies in the participation of TV stations.

These will broadcast the software in scrambled form, which can then be deciphered by the schools.

The stations will also broadcast teacher-training programmes and offer technical support in collaboration with computer hardware manufacturers.

The plan, a commercial venture sponsored by Software Communications Service, has been successfully tested. However, subscribing schools will need at least 15 microcomputer terminals linked to a local area network.

The capital cost and the reluctance of software publishers to bring down their prices may prove major obstacles to the scheme.

The lid that could cover the schools cauldron

SOUTH AFRICA

The South African Government should take immediate steps to improve conditions in black schools, according to an organization of parents, teachers and pupils.

Mr Vusi Khanyile, the chairman of the National Education Crisis Committee, said that a solution to the underlying causes of class boycotts and disruptions must be found by the end of the year.

He called for the immediate lifting of the national state of emergency declared on June 12, the release from detention of all teachers, parents and pupils, and the immediate re-opening of the 33 schools recently closed by the Department of Education and Training, which governs black schools.

Mr Sam de Beer, deputy minister of education, claimed the schools had been closed because "no meaningful and effective education" was taking place. He denied the closure was an attempt to deprive children of an education.

The NECC, the African Teachers' Association of South Africa and the African Students Organization have demanded the immediate re-opening



of the schools. Mr Randall Petful, the president of ATASA, said the closure would have a very disruptive effect on the children who were in the schools which were open.

The presence of security forces in schools has resulted in many black pupils refusing to register for classes this year.

Mr de Beer said he would like to see the security forces withdrawn from the

townships. "But, at the moment our schools are being vandalized. The safety of our property is at stake and we have to protect the children and teachers."

Mr Khanyile said that the strict measures and mass detention of many pupils, teachers and parents had resulted in a breakdown of communication within the NECC.

"Many of our meetings have been

prevented. Unless we are given a free rein to operate, it will be impossible to solve the problems."

Pupils are due to take their matriculation exams on October 24. Some student organizations have called for a boycott in the Transvaal and Eastern Cape, which is likely to spread to the Western Cape.

Mr Khanyile said he was pessimistic: "We hope children will write exams, but the fact remains that the Government has closed schools. Many have been accommodated elsewhere, but obviously these schools are not running normally."

He called for schools to be handed over to the black people. A commission and subject committees in English and history had been created by the NECC to examine this issue with more subject committees to follow.

The new "people's education" curriculum would promote non-racial, democratic values. Mr Khanyile emphasized that it demanded discipline, dedication and hard work.

Mr de Beer said that while he strongly disagreed with the political implications a greater community involvement would be positive.

Sue Fleming

Tamil militants kept out of exam halls

SRI LANKA

Citizens' committees in Sri Lanka's northern and eastern provinces have ensured that A levels were not disrupted by Tamil militants.

When the Education Ministry was planning security for the exams, parents pledged to stop disruption.

The joint military-parental approach arose from an experience two years ago when Tamil terrorists were alleged to have disrupted GCE exams at several centres in the north. They were claimed to have entered examination halls and stolen papers, and the exam department had to set new question papers.

Parents are meeting the cost of school security following bombings at Katunayake airport and the central telegraph office in Colombo last spring, and several hoaxes in the capital's schools.



Tamil terrorists have been accused of blowing up a school-house

The ministry drew up security measures for schools - hiring guards, building up walls, and keeping outsiders out. The costs are borne by parents through so-called school development societies.

Tamil militants are reported to have destroyed the Vavuniya Central College in Jaffna. It had been recently handed back to the school authority by

the security forces, who had occupied it since the third week in May.

The 1,200-pupil school stood just over a mile away from the Palaly army camp. The security forces claimed planes and troops had often been fired at from the school-house, and the army took it over.

It was decided to leave the school after parents complained that their children's education was disrupted by the occupation.

But militants, said to belong to the Liberation Tigers of Tamil Eelam, are reported to have stripped the building of files, desks and other furniture and launched a mortar attack on the army camp.

Explosives were then said to have been planted in the school-house and apparently to prevent the security forces re-occupying the building in a counter-offensive.

D B Uddegama

Minister announces new public exam for deaf

AUSTRALIA

Luis Garcia reports on the first accredited course for the hearing disabled

The South Australian Government has given the go-ahead for what will be Australia's first accredited hearing school course for pupils who have hearing difficulties.

The state's Minister for Education, Mr Greg Caffer, has told parliament that the initiative would provide new educational opportunities for young people who were mildly deaf or who had similar disabilities.

He said that South Australia's senior secondary assessment board had officially credited the course as an examinable subject for pupils in the 12th and final year of secondary education.

Mr Caffer said pupils would be able to learn sign English and other skills, and have their records on their secondary school certificate.

"This new course enables students to learn to use their communication abilities and at the same time provides

them with formal school recognition," he added.

"Some students with hearing impediments have successfully completed school-assessed or publicly-examined English, but this course will open the door for more young people to gain education and work opportunities."

If the course is successful, and the indications are that it will be, it will be the backing of several community groups and the teaching union in the state, it is expected to be adopted by educational authorities in other states.

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High risk gamble for CDT staff



Delayed start for some technology syllabuses

Sir - Despite the impression given by the media and in the articles by Hilary Radnor and Bob Doe (TES, September 26), not all GCSE syllabuses have been approved by the Secondary Examination Council, nor indeed are they all ready to be approved. Information from the Northern Examining Association (now to be called CDT Technology Syllabus B) states: "It is unlikely that the published syllabus will now be available before the end of the autumn term."

While the NEA already has two technology syllabuses (Control Technology and CDT Technology A), these are both based on a systems approach and are not therefore of a modular nature.

Mode 1 syllabuses like the NEA's CDT Technology Syllabus B, should have a strong chance of being accepted by the SEC, but the position of the Mode 3 cannot be so clear, as Section 18 of the General Criteria indicates that the unnecessary proliferation of subject titles and of syllabuses is to be

avoided. For example, a group in Bradford has submitted a Mode 3 Modular Technology syllabus which has yet to be approved by the SEC.

Teachers must now gamble on which modular syllabus to start teaching. The SEC could approve the Mode 1 first and then not approve the Mode 3 on the grounds that the NEA has enough technology syllabuses. If teachers do not start teaching the unapproved Mode 3, approval may be withheld on the grounds that the Mode 3 is not needed. If teachers do start teaching the unapproved Mode 3, the SEC is under pressure to approve the syllabus, even though they would rather limit the number of syllabus and subject titles as per the General Criteria.

Whatever the outcome, pupils are being used as guinea-pigs and some will inevitably suffer as a result.

J G WALTON
4 Armitage Avenue
Brighouse
West Yorkshire

Derisory sum

Sir - Your article, "Putting teachers in charge - a scheme for recording the professionalism required to make course work assessments" (11 September 26), highlights, among other things, the financial advantage resulting from a teachers' assessment scheme. I trust that savings along those indicated will not, once again, be at the expense of remuneration for professionalism.

As a teacher of modular technology in a large comprehensive school in Warwickshire I have just received payment from the regional examinations board for the continuous assessment and marking of scripts towards this year's Mode 3 examination.

I estimate that I spent at least an extra 120 hours marking, evaluating and assessing during the two-year course.

For this professional approach to commitment I received the grand sum of £7.81 - the equivalent of 6.5p per hour!

Which other professionals would offer their expertise for such a derisory sum?

In view of the high degree of continuous assessment in GCSE courses one has to ask: "What price professionalism?"

At last I did have the opportunity of deciding whether or not to involve myself in extra professional responsibilities for the benefit of my pupils. Would it be true to say that within the GCSE framework my choice has disappeared and has become an imposition? If so, what are the rates of pay for achieving assessment objectives, particularly in the early stages which require a great deal of extra work outside the normal school day in order to prepare suitable material?

I FROGGETT
10 Warwick Gardens
Lindley Park
Nuneaton
Warwickshire

The lasting benefits of continuous assessment

Sir - I found Brian Cox's article "Grade bullies" (TES, October 10) entertaining and amusing, but remote from reality and from my own experience, not merely because I was describing another country. In 15 years of using the continuous assessment method, I have never been propositioned, bribed or bullied. I feel that the article was tendentious and unnecessarily alarmist.

The answer to Professor Cox's question whether departments selecting 100 per cent course work prepare pupils for A level examinations is "yes". The practice at my school (and at other independent schools - presumably maintained ones too) is to set wide-ranging and challenging courses as part of the internal assessment component of the syllabus offered by the Oxford and Cambridge board.

As a result, we increasingly felt that A level was stifling and limited (some schools avoid this by concentrating on the syllabus in the upper sixth only), so we switched to the Cambridge board, which offers an internal component at A level.

In practice, pupils at Egham College study three or four texts in detail and an additional three or four (minimum) from a wider reading list. The course concludes with a 2,000-word essay, which enthusiastic pupils extend to 5,000. High standards are achieved and large numbers opt for A level English.

There is a broad correlation between the marks achieved for the internal and the external parts of the exam. But the quality of teaching and of learning is much enhanced.

As a result, we increasingly felt that A level was stifling and limited (some schools avoid this by concentrating on the syllabus in the upper sixth only), so we switched to the Cambridge board, which offers an internal component at A level.

Pupils study 16 texts as well as

additional authors for their seminar paper and long essay. The consequence is that they are better read than many of their contemporaries and are well prepared for university.

The system ensures that all pupils are well-read and are not spooned for examinations, and that their results reflect quality measured over a long period.

If headmasters are disquieted by internal assessment, they should ensure that their English departments devise challenging and rewarding courses; it is equally the responsibility of examination boards to monitor the quality of work submitted in their name.

KEITH BARRON
Head of English
Egham College
Grove Park Road
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Parent governors

Sir - The excellent feature on parent governors (TES, October 3), continues to raise more seemingly unanswerable questions than answers.

Systematic training, as provided by Graham Bond, is clearly the exception and a far cry from the usual "one-off" sessions usually provided by local authorities. The National Association of Governors and Managers programme may be the commencement of an attempt to fill this yawning gap - because governors without appropriate training get tired - but, as you feature says, the timescale of coverage here is really unacceptable.

The feature does, however, pinpoint a possible route through this morass. Stating that "there needs to be a good working relationship with the head if the governor is to take up parents' grievances" could be well utilized by I.C.A.S. in incorporating general governor training within a secondment release scheme, whereby primary and

secondary heads with some genuine measure of commitment to, and successful practice of, working with governors could be released annually to work alongside governors outside of meetings.

In my experience, it is often talking through and over issues and approaches that parent governors most particularly want. Why not establish (with DES funding?) a head-teachers' task-force, supported by "successful" parental/other practitioners?

No head need feel vulnerable in the face of such appointments. They could, indeed, call him/her in to discuss their strategies towards parent governors. Parent governors are well-aware of the need to work through the head; they should then be given more tangible and accessible support to enable them to do so.

TIM PESKETT
Primary Head, Northants
on secondment
in Coventry

French curve

Sir - I was both interested and disappointed to read a summary of the Assessment of Performance Unit findings regarding attitudes to French at 13-plus (TES, September 26). But I was not surprised that girls still had more sympathy towards the subject than boys though the difference, 5 per cent, appears to be decreasing over the years.

What caught my attention most was the overall figure of only around 50 per cent - and the accompanying comment that of most pupils enjoying French I assume at 13-plus means that, in most cases, the children have been studying French for two or at most three years. Having carried out my own survey, on a random basis, of 200 middle school children at 12-plus (after two years of French) and 100 at 13-plus (after three years) from 15 out of 53 different schools in the Doncaster education authority, I am astounded by the difference in the results.

I am, of course, conscious of the fact that I do not know the exact wording of the APU questionnaire. I used one similar to Dr Clare Burstall's, which was administered nationally for the last time some 12 years ago. At 12-plus, 90 per cent of our pupils still like French with only 1 per cent not

liking it at all. At 13-plus there remain 88 per cent who continue to enjoy it. As a matter of comparison, when I carried out a similar exercise seven years ago, the figures were closer to Dr Burstall's national survey and, it appears, to the APU's recent results: 73 per cent still liked French after two years but only 51 per cent did so after three years.

A new communicative approach, in the form of a modern course, now adopted by all our middle schools represents the most substantial change in our teaching strategies and must be the cause for the great improvement in attitudes.

This intrinsic motivation for out-weighs minor geographic or class divisions. Doncaster is 230 miles from the nearest Channel port and, by no stretch of imagination, can be described as predominantly middle class. Our pupils enjoy the learning experience because it is pleasurable. The fact that they are now going to be tested in the skills which, by and large, they enjoy practising may, at last, create a greater demand for languages at 14-plus.

G B RICHEUX
Teacher-leader
Beachfield teachers' centre
Chequer Road
Doncaster

Language exams

Sir - I am writing to express extreme concern for the plight of the less able pupil who opts to take a modern language to GCSE. At a time when we are trying desperately hard to encourage more youngsters to continue to study a foreign language in line with the recent DES policy statement, the GCSE militates against this.

The four English examining groups, in their haste to meet government deadlines, have produced alarmingly similar syllabuses, not one of which can realistically claim to cater for the needs of those pupils in the lower 70 to

90 per cent of the ability range. The assessment techniques, particularly of oral skills, cannot be said to be "appropriate to candidates across the GCSE ability range" as the National Criteria for French require.

A summative assessment as wide as a syllabus places undue burden on memory for these pupils in the productive oral skill.

Language and Culture or European Studies-type syllabuses have been bitter disappointments too. So concerned are the groups to justify the existence of these at Grade C or above that the very pupils who could have been helped by such courses are faced with syllabuses which in some cases demand

not only the minimum three basic skills of the language courses (already too hard for them) but in addition vast quantities of background knowledge, much of which would daunt our sixth-formers if specimen questions are indeed typical.

Previously, teachers themselves have grouped together to produce CSE 2 and CSE 3 syllabuses for less able pupils. I can find no such schemes available for pupils embarking on a course in 1986. Indeed how could teachers submit Mode 3 schemes by deadlines which were before the Mode 1 approved syllabuses appeared?

Should not the SEC be seriously concerned to put pressure on the

examining groups to meet these needs? Is the Government satisfied with a system which closes doors to a large proportion of our pupils at 14? If some action is not urgently taken modern linguists will once again be accused of being elitist. This time they will be right to accuse.

If anyone has a GCSE scheme to enter for these less able pupils embarking on courses in September 1986 I and my colleagues in Hillingdon would be delighted to hear from you.

M MAHONEY
Head of languages
Vyners School
Ickenham

Top rewards

Sir - I read with interest the article by Peter Burke of the Southern Examining Group about the GCSE exam (TES, September 26).

It is comforting to note that the group is hoping to save money by "accrediting" teachers of the new exam. I have looked in vain, however, for a reference to any extra money.

Instead, we are told that the scheme is a recognition of our professionalism. I am not sure that anyone defined the term so that it rewards the same to teachers as to doctors and lawyers?

JANET E JENNINGS
Head of English
Albans Girls' School,
Herts



TVEI impact

Sir - With reference to your article "Creative Arts central to TVEI" (TES October 3), may I point out that the Kent pilot scheme in Canterbury, with no fewer than 12 optional subjects from which students may choose, includes four different creative arts subjects ranging from graphics and three-dimensional art to design, drama and TV media, in addition to the more usual technology and information technology bias that is central to most TVEI projects.

I heartily agree with Anne Snelgrove. TVEI is the catalyst for the most radical curriculum change of this century.

TVEI is the embodiment of a methodology and a philosophy that has wide-ranging implications for all aspects of learning. In essence, it gives autonomy and makes the students responsible for their own learning.

There are implications for INSET, further education and higher education too. It was long ago said that heuristic methods, the experiential problem solving approach that we have rediscovered, makes learning more meaningful.

If this is really the case, then let us apply the lesson to its fullest extent.

SHIRLEY PARKER-GORE
TVEI Co-ordinator
Frank Hooker School
Knight Avenue
Wakefield
West Yorkshire

Student grants

Sir - I noted with interest an "in brief" item (TES, October 3). As a student receiving a full grant from one of the worries about parental contributions might I add my voice to support Mr John Davies in his call to ensure that student grants are high enough to enable essential books to be bought.

With the cost of accommodation, travel and food nowadays, I really think that many students find it hard to stretch their grant to cover books. It is unfortunate that the problem will tend to be worst for those students who often do not have experience of managing their own money and have the longest book lists.

Most of the time students are faced with the problem of how to stretch their grant to cover books. It is unfortunate that the problem will tend to be worst for those students who often do not have experience of managing their own money and have the longest book lists.

It will come as no surprise to those of us working in initial teacher education that the Select Committee should express major reservations about the role and mode of operation of the Council for the Accreditation of Teacher Education and should recommend its demise. Many of the principles embodied in the council's criteria for accreditation are commendable in terms of the importance attached to partnership between schools and training institutions and of links between theory and practice.

Criterion 1, however, with its special allocation of two years' subject

Wrongly assessed

Sir - I read with astonishment Brian Cox's article "Grade bullies" in which he argues that the use of continuous assessment "corrupts the relationship between teacher and student".

As a lecturer who for the past seven years has been involved with continuous assessment in Business Education Council and Business and Technician Education Council courses I have come across none of the difficulties experienced by Professor Cox.

As most of his anecdotal evidence is based on his experience from the States, I can only wonder whether sexual harassment and bullying by students for better grades is a cultural phenomena and not a problem implicit in this form of assessment.

What continuous assessment does is to open doors. Professor Cox implies that the only type of work he sets students is essays. The great strength of continuous assessment is that it gives the teacher freedom to experiment with group work, role plays, reports, video production, computer simulations, to mention but a few ways in which students can produce their ideas.

It is a simple process to prevent misunderstandings over grading by producing for the students grading criteria when the assignment is set. We need to move away from the idea that students only produce work to gain grades. The purpose of producing work is to assist learning and the grading should be seen as a guide to how well that learning has taken place.

Continuous assessment should be seen in this light and if it is it can only strengthen the student teacher relationship.

EDWARD SALLIS
Head of Business Studies
Guldford College of Technology
Stoke Park
Guldford
Surrey

Off balance

Sir - The publication of the Select Committee's report on primary education (TES, September 26) will be warmly welcomed in the teaching profession. It contains many wide-ranging proposals which, if implemented, could do much to enhance the quality of primary education and significantly raise the level of morale within the teaching force.

It will come as no surprise to those of us working in initial teacher education that the Select Committee should express major reservations about the role and mode of operation of the Council for the Accreditation of Teacher Education and should recommend its demise. Many of the principles embodied in the council's criteria for accreditation are commendable in terms of the importance attached to partnership between schools and training institutions and of links between theory and practice.

Criterion 1, however, with its special allocation of two years' subject

Not corrupting

Sir - Brian Cox is right to suspect that his recent back-page item relies too much on anecdotal evidence. His questioning of the credibility of the 100 per cent course work assessment GCSE schemes adopted by many English departments would be more forceful if validated by experience more relevant than his in an American university 22 years ago.

Part of Professor Cox's problem is that he seems to indentify 100 per cent course work schemes with the hasty implementation of the GCSE. Those of us who share his concern about the inadequate funding, timing, training and resourcing of the new exam, generally do not associate these inadequacies with our particular chosen English syllabus.

Many of us have opted for the 100 per cent course work schemes of the Northern Examining Association in the confident knowledge that these schemes are based on over twenty years' experience of running the work-only O level assessment in the form of Joint Matriculation Board syllabus D.

Teachers familiar with this scheme and its successor (Joint English B) do not feel rushed into schemes of dubious credibility; neither do they feel that they owe anything, by way of spirit of initiative, in any contributions to education made by Sir Keith Joseph.

Rather, they feel that national practice is now coming into line with established criterion-referenced assessment as practised under the aegis of the NEA already.

Professor Cox's doubts concerning the preparation of students for A level begs the question. It may be more pertinent to ask when A level is to adapt to GCSE advances, and become better able to assess those skills and abilities developed by course work assessment. This is especially true now that much post-A level assessment is also based on course work.

For the moment, however, I must reassure Mr Cox that many English

teachers find first-year A level students better equipped for investigating techniques, and the causes of their own aesthetic responses when they have come from two years' experience of course work assessment.

The inculcation of such dubious skills as gobblet-recognition, quotation-memorizing and Brodie-arguing, which constitutes many candidates' experience of O level literature in preparation for traditional board-assessed exams is not necessarily a sound basis for A level performance.

Plagiarism is, of course, a problem, but schemes like the NEA ones create tiers of moderation involving the class teacher, the organizing teacher, the external assessor and the review panel. They also require the submission of a proportion of work completed under controlled conditions.

More importantly, perhaps, teachers working those schemes will regard writing as a process, not a product, and will give class time to the drafting and development of course work assignments, ensuring that they are familiar with the unaided quality of candidates' work.

This emphasis on the importance of writing as more than a rehearsal for a distant eventual performance means that less work is now done entirely at home, where Professor Cox's middle class parents will be conferring their advantage.

Finally, it seems to me that, rather than being a "corrupting" influence on the relationship between teacher and taught, continuous course work assessment restores a professionalism and an integrity to the relationship by its insistence that the pupil should understand the criteria by which he or she is judged - and that the teacher should make available the skills by which performance can be bettered.

Harsh reality

Sir - Tyrrell Burgess's article (TES, October 10) was inspired in its evaluation of the harsh reality of amalgamation, whether it be applied to high or primary schools.

Kenneth Baker's draft circular must have caused many a teacher and parent to grimace when its full implications became apparent. However, to be fair, it does look very closely at the procedures which should be followed by an education authority in its plans to amalgamate schools.

I would advise any parties in the process of waging war against a local authority, because of proposed amalgamations, to read this document carefully. It does offer possible grounds on which objections might be based.

In Harrow, despite the rising birth-rate and tens of thousands of places in first schools, six first and six middle schools are proposed for amalgamation. I applaud Tyrrell Burgess for his perception when he states that parents

know the difference between real choice and the choice of what some official thinks should be available.

Already, parents in Harrow are realizing that their freedom to choose has been severely curtailed as a direct result of the strict restriction of intake at 4+ in order to implement amalgamations.

Tyrrell Burgess goes on to say that "schools are living organizations... what they cannot and do not survive is being shaken about, decapitated, amalgamated or homogenized in deference to some formula devised by remote and unimaginative officials".

As a teacher, I can vouch for the accuracy of this statement and I appeal to Kenneth Baker to rethink some of the guidelines laid down in the draft circular.

PAM ROBSON
Teacher governor
14 Bloombury Court
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Harrow
Middlesex

First claim

Sir - Before Mr Kenneth Baker claims local financial management of schools as a Conservative initiative, may I record the facts of its conception?

Local financial management of schools started with a resolution moved in Cambridgeshire County Council by city councillor John Brackebury, a Liberal. He resolved the support of a Conservative county councillor, Robert James, in his personal capacity.

A pilot scheme was set up for six schools, which Cambridgeshire, a county where the Alliance holds the balance of power and also the chairmanship of the education committee, has now extended to all schools. It is Alliance groups in other counties too who are now following the Cambridgeshire model.

SHIRLEY WILLIAMS
President
Social Democratic Party
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Science standard

Sir - I write on behalf of the Association for Science Education to express the unease we feel at the recent statements of the University Grants Committee concerning the judgement of quality in university education.

The association (the largest subject-teaching association in the country, with more than 18,000 members) views with concern the emphasis put on research as apparently the only criterion by which departments in universities have been judged by the UGC.

As an organization working for the highest standards of science teaching throughout the education system, from nursery to higher education, the association would have preferred the UGC to have placed equal emphasis

on both research and teaching. The fact that the latter is more difficult to "quantify" is no reason to ignore it.

Teachers in school advising sixth-formers will, and should, seek good teaching in undergraduate courses and make recommendations to their students accordingly.

Good teaching and research is vital at both the undergraduate and post-graduate levels, but nowhere is it more crucial than in departments of education training the next generation of teachers.

The association is concerned that the apparent over-emphasis on research, imposed from within each institution in response to pressures from the UGC, could lead to lecturers in education being appointed for their ability to attract research funds rather

than for their equally important teaching skills.

Likewise, since promotion in universities appears to be linked to funded research rather than to teaching skills, existing staff may well feel constrained to curtail time spent in preparation for teaching in favour of pure research activities.

The association would like to see the UGC modify its criteria to include good teaching as a criterion of assessment equal in status to that of research.

JOHN NELLIST
Chairman
Association for Science Education
College Lane
Hatfield
Herts

Acts of worship

Sir - It would seem to me that there are two important stipulations within the 1944 Education Act with regard to assembly, namely that it be both collective and worshipful.

From the outset it was seen that the first would create logistic problems in some schools. For some time now, the instruction to worship has been seen by many to be religiously abhorrent and educationally suspect.

Thus it was with some concern that I read your article "Bradford tries out alternative assemblies" (TES, October

10) as the way forward. My worry is that we may exacerbate a potentially divisive and harmful situation, albeit with good intentions.

Though the new assemblies will do justice to making the act of worship a meaningful experience for those involved, they may at the same time be viewed as divisive and sectarian against the original vision of a gathering of the whole body of the school around a single (albeit impossible?) act.

If the "ethnic minorities" are to worship separately, why not Christian denominations and the so-called "sects"? Who then makes sure that the

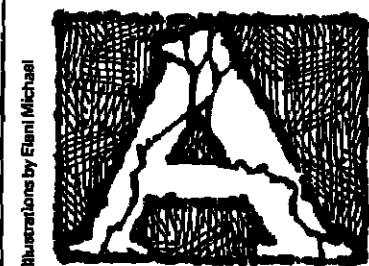
Quaker quiet room is not adjacent to the Pentecostals? Further, what happens to the vast majority of the pupils (some estimate 90 per cent) who do not openly practise any religion at all?

By all means let the school continue to assemble, if that is thought useful, but let the worship be practised in a more natural context, namely the respective home and religious community.

C S MEEGAN
Head of religious studies
Driffild School
Driffild
North Humberside

هَذَا مَقَامُ الْعَمَلِ

More must mean different



Only by scrapping the highly specialized A level will the Government get the extra science and technology graduates it wants, Bob Doe argues

Scrapping the last vestige of the grammar school – the highly specialized three A level sixth-form – seems an unlikely thing to expect a Government led by Mrs Margaret Thatcher to do. But then who would have guessed four years ago that a Conservative Government would in 1986 abandon O level and drag a reluctant teaching profession kicking and screaming into the GCSE?

The reason for that ironic turn of events, of course, was that by the time those broadly committed to the new 16-plus had begun to get cold feet about the practicalities, the realization had dawned on the powers that be that only the GCSE, with its national criteria and broader target group, could provide the Government with the necessary lever on the 14 to 16 curriculum to bring it into line with its assessment of national economic needs.

Kenneth Baker, the new Secretary of State for Education is now calling for an expansion of higher education. The Green Paper issued by his predecessor stressed the need for more vocational degrees and more science and technology graduates. But probably the only way of achieving that goal is to scrap the present highly specialized three A level sixth.

So far, the Government's sixth-form initiatives have been very cautious. AS levels, taking half the time for an A level, are supposed to temper the rigid specialization of the academic science and arts sixth. And the Certificate of Pre-vocational Education is to concentrate the minds of the "new sixth" – and their teachers – on what we have learned to call "the world of work".

But there are already signs that neither of these will perform quite as expected. Though the AS level has met with widespread goodwill, it is unlikely to have as much impact on the old sixth as the tendency already apparent (see opposite) for many students to take a mixture of humanities and science A levels. Indeed it may even reduce the numbers in maths and science at A level.

As for the CPVE, on the day of its launch, Sir Keith Joseph was busy saying it was "for those not clever enough to take A level". But the Joint Board responsible for it was simultaneously extending the CPVE's clientele to include those taking A levels, making a broader route to university entrance possible – if highly improbable in present circumstances.

Further pressure for a more practical and vocational sixth comes from another highly influential source. With a £900 million extension of the Technical and Vocational Education Initiative in the pipeline, the Manpower Services Commission also has a substantial stake in the sixth form curriculum.

Determined to make TVEI attractive to the full ability range, but conscious of the vulnerability of its more practical approach and modular A levels, the MSC has been quietly talking to university admissions tutors. The Commission knows that to get high-fliers on to the TVEI it has got to be able to hold out the prospect of a university place.

The A level boards are anxious to respond to the MSC initiative, fearing that otherwise their traditional sixth-form market will be taken over by vocational examining bodies striking a deal with the universities. The school examining boards have acted swiftly to accommodate the new modular TVEI qualifications.

At the same time there has been a clamour of demands elsewhere for a broadening of the sixth-form curriculum. Included among these were the universities' Committee of Vice-Chancellors and Principals, the Standing Conference for University Entrance and the Government's own Secondary Examinations Council.

Many of the university responses to the higher education Green Paper acknowledged the need for changes in the sixth-form curriculum. Their new attitude was a far cry from the pessimistic reception the dons gave the ill-fated N and F level proposals eight years ago, though the academy of British scientists, The Royal Society, supported N and F at that time.

The Labour Party also recognizes a need for change. In its recently published *Socialist Plan for Education* (Fabian Society No 514), Giles Radice says:

"The reform of the 16-plus exam and assessment system will make it even more essential that we replace A levels by a less specialized exam at 18-plus which becomes part of an integrated system of assessment covering both academic and vocational qualification."

Changes in the 14 to 16 curriculum as a consequence of the GCSE – with its supposedly "bottom-up" practical approach – may be laying firmer foundations of knowledge and skills for more students. But at the same time, the scrapping of some of the content of the old O level threatens to erode the foundations of the top-down A levels.

This makes a subject-by-subject review of A level an urgent priority. Indeed a limited reappraisal has been started by the Secondary Examinations Council and has to be completed in less than a year's time to allow any new A level syllabuses to be available in schools by 1988 when the first GCSE students enter the sixth.

These changes may give rise to some A levels that are themselves broader in conception, building upon the "bottom-up" practical skills approach of the GCSE. Already, the Joint Matriculation Board's new French A level due to start in 1987, for instance, will cater through project work for a much broader range of language learning needs than just those required to study French literature at university.

The relatively new maths and statistics A level is another pre-GCSE recognition of the wider interests of those now taking maths at this level. But in many subjects – and particularly those so-called linear subjects like physics where further and higher education is said to build on the learning that has gone before – the requirements of the single subject university honours course seem likely to continue to dominate the sixth-form curriculum: a domination reinforced by the present fierce competition for university places.

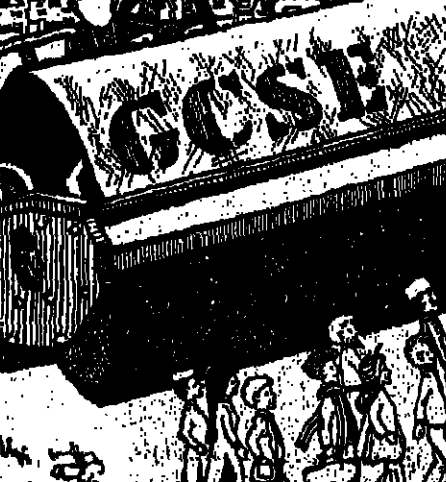
Indeed, this formal link is recognized in the common cores for science and maths A levels that have been agreed between university interests and the GCE boards.

But the question now increasingly asked is not so much whether the bottom-up approach of GCSE can be married to the top-down approach of A level, but whether it is still sensible (if it ever was) to allow the narrow requirements of university subject departments to determine what is taught in schools.

The recent meeting of the Schools Examination Council urged the Secretary of State to consider a review of A levels, pointing out that 40 per cent of those taking them do not go on to higher education.

Indeed, in calling for more vocational degrees the Government, in its Green Paper on higher education, is effectively questioning the assumption that the requirements of postgraduate university scholarship should figure so large at the undergraduate level, let alone in schools.

The increased numbers taking a mixture of the numerate sciences with subjects like economics and geography at A level may fill vocationally oriented undergraduate courses like business studies. It is less easy to see where the increased numbers of science and technology undergraduates will come from.



unless universities are willing to broaden their intake criteria.

Certainly the AS levels will not provide them. Indeed, they may make very little impact at all as few sixth-forms can afford to run them without extra funding.

Two kinds of AS are emerging. One acknowledges the difficulty sixth-forms will have in mounting separate AS courses. Some boards are sailing as close as they can to the half A level formula in the hope that this will enable AS and A level groups to be taught simultaneously and economically.

But is half the A level physics syllabus likely to prove attractive to an arts sixth-former, or half the English or French literature syllabus a worthwhile diversion for the science sixth? For those convinced that it is not, the second type of AS sets out to custom-build a more attractive or useful cross disciplinary course like science and society, statistics or information technology.

One problem that does not seem to have been acknowledged here, however, is that if, as is hoped, more arts sixth-formers take science subjects, then, since they outnumber the science sixth approximately two to one, the upshot is bound to be extra demand for science science and maths teachers in the sixth. Theoretically, as much as 12 per cent extra science teaching could be required without a single extra maths or science undergraduate to show for it.

The repercussions of this are not likely to be felt hardest in the high status sixth, but lower down at the 11 to 16 level where shortage teachers will be even harder to come by. That in turn threatens to reduce the numbers coming into the sixth with hard-earned maths and science GCSEs.

Whatever happens, AS levels promise at best to produce rounder, more scientifically literate arts and humanities students and more communicative scientists. They do nothing to increase the numbers available for science and engineering degrees – and could even have the opposite effect.

As Professor Geoffrey Howson pointed out earlier this year (TES, April 11), there is little evidence of any untapped reserves at 16 plus of students numerate enough to cope with the present overcrowded and highly demanding maths and science syllabuses, even if they could be persuaded to make the switch.

The only way of increasing the science sixth is to make these courses simultaneously more attractive and – not to put too fine a point on it – easier; or at least, as easy as they once were. For just as the Q-level syllabuses had become too overladen to have maths and science A levels been blocked one-way streets – plenty going in, but very little coming out.

As Geoffrey Howson points out, Britain would not be alone in taking this step to increase the numbers qualifying in technical subjects at 18-plus. And it would not necessarily be totally disastrous for the universities either.

Their problem, even in the linear subjects like maths and physics, is not so much whether essential work is or isn't included in A level, as the variety that exists between different syllabuses.

Many first-year university courses go over A level ground again, while others, like economics or law, assume little or no pre-knowledge. What causes difficulty in the linear subjects is when departments find great variations in the work students have or have not done. If the ground to be made up was common to all it could be covered without too much difficulty with such a highly motivated group of students, using self-instructional packages if necessary.

The minimum cores agreed between universities and exam boards, though yet to be reviewed by the SEC, are designed to overcome this uncertainty. But at present they are purely

voluntary and the boards can ignore them.

There are some signs that universities might now be prepared to accept considerably less of their subject from sixth-formers, especially some sort of core was compulsory. Indeed, they may even come to prefer it if reduction in specialization was accompanied, as some suggest it would be, by a more mature, broader outlook, improved motivation, and better independent study skills.

Employers are concerned about the excessive academic nature of the curriculum. But there is also continuing concern among some academics about the "academic tramlines" delivering students to universities without allowing any room for the sixth to consider why they want to go.

A period of something like work experience is argued, even for the most able would encourage clearer self-insight and sharpen motivation.

Some regard AS levels as a first, very small step along a widening road to reform: a palatine gradual approach with first two A and two AS levels, later becoming one A and four AS.

It is hard to see from where the stimulus for such a change is likely to come, however. Certainly it will take more than encouraging noises from university vice-chancellors and ministers to convince sixth-form tutors that what places at university are tight it makes sense to abandon the tried and trusted three A's. A more likely trend, mirroring that towards four A's, is three A's and one AS.

A breakthrough involving more practical limited content sixth-form assessments coexisting with traditional A levels is similarly unlikely, even if the alternatives carry the seal of approval of the MSC. Any such attempts are bound to run up against the hegemony of the university admissions tutors and the competition for places at colleges at the top of the pecking order.

Universities will simply favour – or be expected to favour – those qualifications specifically tailored to their requirements, given the choice. The continuation of any top-down standard will inevitably kill off attempts to build up the large group of students in the sixth to something other than limited core of A level, using the broader GCSE and TVEI curriculum approach.

Just as the GCSE was only possible because the O level was killed off completely, so would any new-style sixth-form subject qualification need clear run. All the present A levels would have to go if the new qualifications were to be second-class, CSE-style status.

Moving to even remoter realms of speculation it is clear that such replacements for A levels would only continue to enjoy general confidence if there were clear criteria that would apply to all.

National criteria for the sixth would have to take account of the universities' requirements. But they would presumably balance these against wider national interests, the views of employers and the students' own needs for personal and career development.

A requirement for breadth could be built in through the reintroduction of the principle of university matriculation with minimum requirements in a range of subjects set at modest levels and capable of being satisfied by a wide variety of alternative academic and vocational qualifications. This would also encourage broader option choices lower down the school.

Only the Secretary of State can embark on changes anything like as far reaching as these, and probably then only after a major enquiry into their ramifications. But the ball has now been passed squarely into his court.

Given the failure of previous well-meaning attempts to broaden the sixth and the mass of qualifications and interests vested in the 16 to 18 age group, a reappraisal of sixth form education may be the only way of encompassing the future of university admissions and finance in a coherent and acceptable policy. That would involve considerable delay. But even that might have its attractions, avoiding for Mr Baker the embarrassment, this side of an election, of issuing a death sentence for A level.

The AS and alternative A level experiments will continue. But only through some clear cut from the top will any real change be wrought in the present limiting system of A levels. Only by radical change in content and style will substantially more sixth formers qualify in advanced level maths and sciences. More need not mean less, but it must be different.

The secret scientists

Concern is frequently expressed at the relatively low proportion of sixth-formers studying the sciences. Nearly twenty years ago the Dainton Committee enquired into the apparent "swing from science" and the Government in its recent Green Paper, *The development of higher education into the 1990s*, finds the seeming reluctance of young people to choose science and maths A levels "remarkable".

What is not widely recognized, however, is that at A level nearly three-quarters of boys and half the girls do study some science and/or maths. Over the past 20 years or so there has been a major change in the pattern of A level studies with the growth of so-called "mixed A level courses".

The Department of Education and Science annual statistics since 1963 show how many and what proportion of sixth-formers study: (1) science and maths only, (2) other subjects only and (3) mixed A levels, which are any combination of (1) and (2).

At first, a narrow definition of science and maths was adopted and it was taken to include only physics, chemistry, biology, botany, zoology, geology and maths. From 1971, it was expanded to include the relatively few pupils studying technical drawing, building construction, metalwork, woodwork or engineering science. But subjects like economics and geography, which have quantitative aspects and at least some similarities with the sciences, were left in the "other subjects" group.

What stands out from Figure 1 is the remarkable growth in the mixed entries. From less than 10 per cent of sixth-formers in 1963, the proportion has risen steadily to nearly 30 per cent in 1983. And for the first time that year it was greater than the percentage in the science and maths only category.

In earlier years, the growth appeared to be mainly at the expense of the sciences – part of the swing considered by the Dainton Committee – but, more recently, proportions in both the science and maths and "mixed" categories have increased relative to the non-sciences. However, while the percentage taking science and maths has fluctuated, mainly in the downward direction, that in the mixed category has continued to expand.

This major shift in the pattern of A level studies, which seems to have occurred largely unnoticed, raises two very interesting questions: what particular subjects are involved and how can the shift be accounted for?

Through the financial support of the Leverhulme Trust and the agreement of the Joint Matriculation Board, we have been able to look at the details of A level entries since their start in 1951.

Ten per cent samples of JMB entries every three years (Table 1) reveal the dramatic growth in mixed A level courses, with a fifteen-fold increase since 1964, the nearest year we have to the start of the DES statistics. Although there was some tendency for more girls to take mixed A levels in the early years, since 1958 the numbers and proportions have been rather similar.

JMB records also enable us to see the variety of subjects involved. In 1983, our sample of 595 boys in the mixed category offered 207 different combinations, and the 596 girls offered no less than 345.

With the exception of 1981, geography, maths and physics has been the mixed combination most frequently taken by boys. In 1981, geography was supplanted by economics, which has come to be a regular part of one of the top two mixed choices for boys. Biology with geography often appears in third spot.

Among the girls, biology and English, and biology and geography, with or without the addition of a third A level, dominate the top three



Substantial growth in the numbers taking maths and science are hidden by changes in the pattern of A level choices, Alan Smithers and Pamela Robinson discover

Another way of looking at the mixed entries is to record the popularity of the individual subjects, and table 2 reveals again the large measure of consistency over the years. Since 1951, maths, geography and physics have been among the top five A level subjects for boys, with either maths or geography the most popular. Geography, biology and English have been among the top five for girls and, for both sexes, economics has gradually come into the picture since the late sixties, although less prominently for girls.

Table 2 also shows the increasing popularity of maths as a subject taken in mixed combination by girls. From ranking as low as ninth, it has come to consistently occupy one of the top two positions. It also ranks among the top two for boys, and in 1983, about a quarter of all pupils studying maths were doing so as part of mixed combination, three times as many as twenty-five years ago.

This may have something to do with the greater range of alternatives – seven as against just pure and applied in the early days. But the most popular of the new options, maths and statistics, only contributed 7.7 per cent of the total in 1983. More likely, the increasing tendency for maths to be studied as part of mixed combinations has come with the greater realization that it is not a science but a subject in its own right capable of being studied with a wide variety of other subjects.

Although similar proportions of boys and girls study mixed A levels, the combinations taken are rather different. Girls seem more often to cross the arts/science divide and about half take biology and a third English as compared with about a fifth and a tenth of the boys. In contrast, 27 per cent of the boys include physics in mixed combinations as against only six per cent of girls. Nevertheless, there are also important similarities and, as we have seen, geography and maths are major subjects for both sexes.

Many of the mixed combinations are quantitatively based. In recent years, about a third of the boys and a fifth of the girls have been taking two sciences (including maths) at A level together with another subject, usually, in the case of boys, geography or economics.

Although as a proportion "two sciences plus one other" appears to have fallen over the years, partly due to the introduction of economics, and a tendency for it to be combined with geography, the growth in numbers of students this represents has been spectacular. Since 1951, the number of boys taking two sciences with one other subject has increased more than ten-fold and the number of girls more than twelve-fold.

In 1983 nearly three-quarters (70.6 per cent) of boys' and half (44.7 per cent) of girls' JMB A level entries included at least one science or maths and this proportion has increased appreciably over the years (Figure 2). National statistics give even slightly higher percentages and we have now nearly reached the position where two in every three sixth-formers are taking at least one science or maths, largely through the growth of mixed A levels.

This apparent growth is, partly at least, a matter of definition. Neither economics nor geography is classed as a science and both appear

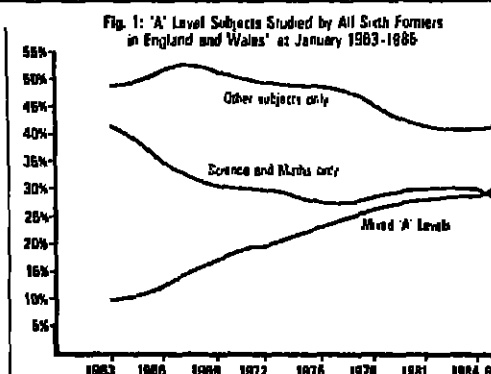


Fig. 1: 'A' Level Subjects Studied by All Sixth Formers in England and Wales at January 1983-1986

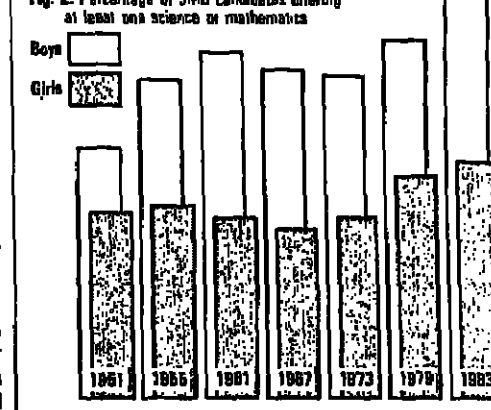


Fig. 2: Percentage of JMB candidates offering at least one science or mathematics

Table 1: Number of pupils and subject combinations in mixed A level category

Year	Pupils		Subject combinations	
	Boys	Girls	Combinations	Girls
1951	25	62	17	28
1952	38	39	24	26
1955	33	51	23	33
1958	88	87	41	37
1961	82	97	53	52
1964	136	129	75	74
1967	242	204	107	76
1970	336	303	138	114
1973	368	331	136	129
1976	477	430	179	162
1979	489	468	188	178
1981	530	476	207	200
1983	595	596	207	245

Based on a 10 per cent sample of JMB A level entries

Table 2: Major components of mixed A level category

Combination	Boys		Girls	
	N	%	N	%
Economics and/or Geography	808	71.8	482	45.0
Mathematics	694	62.8	439	41.0
Arts/Science	165	13.8	361	32.8

□ maths studied outside strict science combinations; and
□ hybrid arts and science courses.

There is inevitably some overlap, but an indication of their relative sizes can be gained from Table 3. The most recent figures show that more than 70 per cent of all mixed courses taken by boys and 45 per cent by girls included economics and/or geography; and 52.89 per cent and 41.0 per cent for boys and girls respectively involved maths. Only in the cases of a third of the girls and one sixth of the boys was there mixing in the sense of actual arts and science subjects being combined.

Looked at in this way, the driving forces behind the expansion of mixed A levels begin to be discernible. One is the rising popularity of economics and the increasing tendency for it and geography to be taken with the sciences. Another is the development which has seen maths to be more likely to be taken separately from the sciences. A third is the spread of choices, particularly by girls (who seem to follow their own interests more than boys), across the arts and sciences.

The phenomenon of mixed A levels also shows that the sciences and maths are more popular with sixth-formers than is commonly supposed. When science and/or maths with other subjects is taken into account, the proportion studying some science in the sixth-form has increased appreciably over the years.

After general studies, the various maths, physics, chemistry and biology in that order are the JMB's most common examination entries. Only English literature which is joint fourth with chemistry breaks into the sequence, and history and French, and even geography and economics, provide many fewer candidates. Paradoxically, at a time of great concern, the numbers and proportion studying some science or maths in the sixth-form have never been higher.

However, even for boys a wide variety of combinations is involved, though several main components can be recognized. These include: □ specialist courses like economics and/or geography plus science or maths;

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Review

The Spanish Civil War. By Hugh Thomas. Hamish Hamilton 1977 (with a new Preface by Hugh Thomas 1986) £20.00, 0 241 89450 6, Penguin £8.95.

The Civil War in Spain. By Raymond Carr. Weidenfeld & Nicolson £6.95, 0 297 78899 X.

The Spanish Civil War 1936-39. By Paul Preston. Weidenfeld & Nicolson £10.95, 0 297 78891 4.

The Shallow Grave. By Walter Gregory. Edited by David Morris and Anthony Peters. Gollancz £10.95, 0 575 03790 3.

The Olive Field. By Ralph Bates, with a new introduction by Valentine Cunningham. The Hogarth Press £4.95, 0 7012 0694 8.

The Penguin Book of Spanish Civil War Verse. Edited by Valentine Cunningham. Penguin £4.30, 0 14 042262 5.

Spanish Front: Writers on the Civil War. Edited by Valentine Cunningham. Oxford University Press £15.00 0 19 212258 4, £4.95, 282006 0.

The fiftieth anniversary of the outbreak of the Spanish Civil War has seen a spate of books that makes it seem as if it still retained its original impact and relevance. But in truth this civil war is now of little interest other than as history. In Spain itself, only the old guard nostalgically hanker for a return to their "good old days". But to the majority of those who have seen the economic transformation of the country begun under, but despite, Franco, carried to the point at which, together with its political accompaniment, new mores and expectations have become the rule, this immediate past, with its hatreds and divisions, its rancour, vindictiveness and cruelty, is something best forgotten. True, the period has bequeathed serious problems, far from solved as yet. But the solutions being sought are part of present-day international society, to which the obscurantism and repressiveness of the Franco regime are irrelevant other than, so far as vestiges remain, as obstacles to be overcome.

The books noticed here are therefore to be judged first on what they contribute to an understanding of this period. None of the three histories can be wholeheartedly recommended. Hugh Thomas's is the most thorough. Military engagements and political developments are minutely chronicled, and the wealth of material is staggering. Yet if ordinary acquaintance with the events is what is wanted, this very comprehensiveness is a disadvantage: too much is demanded in the way of attention and memory. It is most useful for reference, with a very detailed index. Raymond Carr's work is a summary, the product of wide reading and research thoroughly digested and assimilated. Reservations granted, his is a good general introduction to the history of the period written in a pleasantly readable style. Paul Preston's book is remarkable chiefly for the photographs supplied by Dr Sheelagh Ellwood. It itself adds nothing of importance to the works just mentioned, but, falling Carr, it too will serve as a useful survey.

All three works share the same defect, a misunderstanding of Stalin's policy that leads the writers to present both him and the Communist Party in far too favourable a light, and to dismiss any alternatives to Communist Party policy as impractical.

With regard to revolution after the early Twenties, Stalin had one aim only, to prevent it at any cost. His directives in the Spanish Civil War were essentially determined by this, not, as argued by all three writers, by power political considerations (though these must of course have been taken into consideration). The policy was in substance like that followed in Germany during the collapse of the Weimar regime and the rise of Hitler. Where possible, Stalin dealt with individuals and organizations in accordance with Lenin's 1907 pronouncement that actions to that end had to be "calculated not to convince but to break up the ranks of the opponents, not to correct the mistakes of the opponent, but to destroy him; to wipe his organization off the face of the earth". Only on such grounds is it possible to explain how, at a time of chronic shortages, the Secret Police (SIM) in Republican Spain found time and means to build special prisons for political prisoners on the model of the Russian ones.

If Stalin lost interest in Spain after 1936, it was due to the circumstance that the "liquidation" of the Anarchists and the POUM had been sufficiently thorough to end any possibility of their being a menace. (This notwithstanding, savage persecution was continued later in the refugee camps in France; and even the experts and advisers sent to Spain were upon their return "disposed of": test they should have become contaminated, exactly as the repatriated prison-



International volunteers in a monastery hospital kitchen and (below) an American booklet appealing for sympathy with the Republic

But revolution is unrealistic



Pierre Watter on the part played by the Communists in the Spanish Civil War, and on the way the leading historians handle it

ers of war were later.) One cannot take seriously the contention that Stalin was guided here by his fears of Germany. If one recalls how little he allowed this to influence him when in 1937/38 he decapitated the Russian army...

A result of this misconception of Thomas's, Carr's and Preston's is seen in their attitude toward the several policies of the Anarchists and the POUM - and the Communists. For the former, the war against Franco made sense only if it formed part of the revolutionary transformation of the country. It was not worth fighting, if its result was to be (at best) the restoration of a bourgeois republic that had already shown itself not merely incapable of dealing with poverty, inequality, hunger and oppression, but unwilling to do so; and was on that account discredited among those whose efforts would decide the outcome of the war. This restoration, which presented no threat, was precisely what Stalin favoured. The Communist slogan, "War first, revolution later" embodied the idea, the aim and result of which was to postpone revolution *à la die*. The argument advanced by Thomas, Carr and Preston, that this was the only practical realistic stance betrays their eventually conventional approach, which is far more of a bias than any lack of sympathy with Franco (for which Preston apologizes) and determines the tenor of their presentation of the events.

The fact is that revolutions are sui generis unrealistic; it is this that makes them revolutionary. Because of this they have unconventional possibilities of action which, if properly exploited, can compensate for what are, as conventionally judged, weaknesses and failings. It cannot be asserted that a revolutionary war in Spain could absolutely not have succeeded, even had it been fought energetically with all unconventional means at its disposal.

What we do know is that, once (as General Rojo later lamented) Franco had, with Stalin's advantage in the ensuing conventional war which differences on the right found their limit in the defeat of the Republic and the repression, if not the slaughter, of those opposed to the privileges of the mighty.

To go on then to praise the Communist Party for having kept the war going for as long as it did is really tasteless, and invites the retort: Of what use was this, when everything the war had at first been fought for had long since been lost precisely owing to Communist policy?

An objective account of the Spanish Civil War is no more possible than of any other historical event, since any account is unavoidably selective. Nevertheless, it behooves historians not to per-

petuate error, where correction is possible. One of the three considered here seems to have been equal to the duty. The lies which characterize the war on the Republican side, most blatantly the Communists and their adherents - lies which Orwell so bitterly completed - have, important respects been reproduced in all three works not by design, but owing to an insufficiently informed and critical approach to Stalin and the Communist Party. The result is that the histories, for all that they contain criticisms of the Communist Parties in Spain and abroad, none the less give an account of the period that is in essence in harmony with the Party line. They succeed in giving the Stalinist counter-revolution its appearance of having been inevitable, and its sanction and make respectable a deliberate betrayal of the better possibility that should have been exposed and condemned. The sufferings of the Spanish people during the Franco regime, the result of this counter-revolution more than the Anglo-French force of non-intervention, no one reading these works is likely to realize. From this point of view all three works leave a nasty taste in the mouth.

The Shallow Grave is a plain account of the author's years with the International Brigades in Spain, from December 1936 to his release there in 1939. The editors from time to time have included paragraphs giving extra information necessary to follow the thread of the story. This is little here not familiar to readers of Orwell. However, there is something compelling about the dignified, undramatic way in which episodes which must have been frightening and, at times harrowing are related. Within its restraint compass it gives an intimacy of detail to what treated as history, almost necessarily becomes impersonal - and this is in no way affected by the fact of Gregory's having belonged to the Communist Party. Notable also is the fact that nowhere does Gregory indulge in the interwar language so commonly used at the time and referring to fascists - and this despite his unpleasant experiences at their hands. This is his work an added power.

For all its editor's attempts in his introduction to give it an almost epic symbolic significance, *The Olive Field* never rises above the cardboard level. The writing is undistinguished, the repetitive, the characters shadowy figures who never come to life. It is difficult to sustain interest in a story of such elephantine slowness. It should have been reprinted in a new edition.

The last two works make a strange pair. The earlier has an excellent introduction that gives a brief account of the impact of the Spanish Civil War on British intellectuals and artists, and tries to account for their involvement in it. It is a painful reading for the most part. The political illiteracy and naivety of that generation passes belief. This perhaps explains, but does not excuse, the willingness of so many of the leading writers to accept and take part in the propaganda of the Communist Party. Cunningham's discussion enables one to understand why so much of the poetry here reprinted strikes as false notes: there are rhetoric, posturing, effusion of concern a-plenty, but hardly anything that strikes a note of genuine concern, genuine feeling or emotion. The difference was patent to anyone who compares the delicate simplicity of John Cornford's poetry, or of any of the translated romances, with the inflated poetising of Spender, Auden, Barker, or *the genus omne*.

In his new book, *Spanish Front*, Cunningham has fallen victim to the prevailing French fashion for recondite, hermetic obfuscation of the obvious. Most of his introduction is a pompous and laboured attempt to show that nothing is what it seems, that not merely is any recollection of the war formed (and informed) by a host of external factors that make it an interpretation that bears little relation to what actually is thought and recollected; but that even a photograph (and indeed anything at all) is, so far as known, the result of a similar process of transformation. It is presented in part as a criticism (of, among others, Orwell) and in part as a warning against knowing not what, since (so far as the verse is concerned) almost all the poems to be found were printed in the earlier volume (where the reader was mercifully allowed to take them at face value).

It matters little, however, what the writer intends, since the poetry and prose (with few exceptions) give one the impression of being struck a pose, or of using the high kick of formalist politics. Impressive exceptions are Barker, Orwell and Cornford. Why, if not to exploit the war's fiftieth anniversary, was this poetry compilation ever published?

Pure intuition

Dannie Abse on the 'child art' of Garcia Lorca

Lorca: The Drawings. By Helen Oppenheimer. The Herbert Press £15.95.

Of all 20th-century Spanish writers Garcia Lorca is the most celebrated internationally. His plays and poems, those that have been translated into arresting English, are known and revered. His death, too, or rather the events that led to his assassination by the Nationalists in 1936, soon after the outbreak of the Spanish Civil War, have been fully documented, notably by Ian Gibson, in his touching book *The Death of Lorca*. Little enough, though, is known in Britain about the details of his life other than such salient facts as that he was born in a village near Granada in 1898; that he felt a deep sympathy for Gypsy folklore, that he formed his own travelling theatre, that he was a gifted musician, and, of course, because gossip about a celebrity's sexual appetite travels quickly, that he was a homosexual.

Few in Britain know of his ability as a visual artist, or how, at one time, he dreamed of being a painter who would take Paris by storm. Helen Oppenheimer, a close friend of the Lorca family, in discussing the drawings of Lorca - executed in pen and ink or with coloured pencils - reveals how committed Lorca was to his art-work.

It was not simply that his talent allowed him to sketch scenes for his plays and to design costumes for his actors and actresses. His first one-man exhibition was held at the prestigious Caceres Dalmat in Barcelona. Sebastian Gasch, a leading art critic of that

time (1927) wrote that Lorca's drawings are "products of pure intuition, it is inspiration that guides the hand of their author. A hand that abandons itself, that does not know or wish to know where it is being led."

This would suggest that Lorca's drawings were surrealist, which is not quite so. Salvador Dali, with whom Lorca was in love, did constantly urge Lorca to move towards surrealism, at least to become less traditional, more modernist in poetry as well as in his art-work. Yet looking at the coloured plates in the attractively produced *Lorca: The Drawings* it would seem that Lorca was his painting-master rather than Dali. Miró whom Lorca described as "the divine painter-poet, child of Catalonia".

It was the naive, child-like vision that Lorca was after, that quality of innocence Lorca discovered when he wrote poetry and looked into the mirror of the gypsies. Child art, not dream art was his preference, the art that "sister to cave paintings and first cousin to the exquisite art of primitive tribes".

Helen Oppenheimer, in discussing Lorca's drawings in relation to his literary work, points to leitmotifs present in both forms. Their ubiquitous sexual imagery would be food and drink to a Freudian interpreter. "With a little knife two men of love killed themselves".

A little knife which scarcely fits into the hand; fish without scales or river... And it scarcely fits into the hand but it penetrates coldly through the astounded flesh

BOOKS



Mujer de los madroños - Woman with spotted mantilla - dedicated to Ana Maria Dali

and there it stops, in the place where the dark root of the shriek, entangled, trembles. (From *Bodas de Sangre*, Act III)

As for the drawings, these are not infrequently of circus figures, clown men wearing skirts, carrying phallic objects - large walking sticks, chains.

Would Lorca's drawings, many of which do seem to me to exhibit a bisexual sensibility, be of interest if he were not a famous poet? Helen

Oppenheimer believes so. There have been many poet-painters, some like Blake and Rossetti whose work, of course, would command attention and be esteemed even if they had not written a word; others like D. H. Lawrence and Isaac Rosenberg excite our interest primarily because of their literary talent. It is to the latter category that Garcia Lorca surely belongs. No matter; anyone interested in Lorca's poems and plays cannot fail to be intrigued by this book.

On the Waughpath

Evelyn Waugh: The Early Years 1903-1939. By Dr Martin Stannard. Dent £14.95, 0 460 14632 2.

Evelyn Waugh left us a detailed self-portrait in his letters and diaries, published under the respective editorships of Mark Amory and Michael Davie. Now comes Martin Stannard to touch up the portrait with a substantial biography covering the first 35 years (a second volume is promised). He does not put the picture, Time and again he catches Waugh out in some monstrous or silly distortion. The "woman typing at the altar" at his first wedding was the priest writing his sermon in the vestry; the gossip about Diana Guinness disliking Robert Byron is unfounded; the country hotel described with rapture in a letter is, in the diary, dismal and sordid; and so on.

Waugh remains the ugly fellow we thought he was, a poseur, a name-dropper, a suburban counter-jumper ashamed of his harmless father and anxious to make it with the smart set, a bully, a misogynist, a drunkard, a cad who steals hotel writing paper and breaks contracts with newspapers; intolerant, irascible, vindictive, bored.

But turn the picture to the light and it glows with different colours. For the first part of his career Waugh always said he disliked the idea of being a writer and that the whole process was an act of self-deception. If he bent the truth in his letters he also lied to himself in his diaries. Dr Stannard's biography helps to remind us that both were the work of a compulsive storyteller, that happens to him, is not transcribed into something more or less rich and strange.

To talk of lies and deception in such a case is naive; we do not call fiction lies, we call it art. Dr Stannard quotes some illuminating advice which Waugh gave to a friend as early as 1920, about the business of novel-writing: "Avoid conversations or thoughts at such length... Be subtle, suggest that even when he had already written some of the pictures he was about to put to use himself. As a novelist he was quite self-effacing, and though not only because he



many years he had no idea what self to efface.

Dr Stannard is good on Waugh's art and on the enormous care he took to get it right; he is also good on popular critical opinion of the time, which misunderstood Waugh's novels and classed him with the Bright Young Things and the cult of youth long after he had learned to view them with disgust.

He finds it easy to defend Waugh's first wife, "She-Evelyn", against the disapproval of those who, like his earlier biographer Christopher Sykes, were shocked by her desertion. He is understandably less at ease when he comes to discuss the favourable stance Waugh took towards the Fascists in Abyssinia, where his admiration for Italian road-building programmes led him into some extraordinarily perverse political comment.

But then Waugh was, politically, a baby. He hated labels, movements, conspiracies. But he loved structure.

Nicholas Ragnall

PAPER BACKS

The Collected Stories of Jean Stafford (The Hogarth Press £4.95). Sophisticated, brittle, meticulously composed, Jean Stafford's 30 stories have the novella feel of *The New Yorker* fiction at its best. Some, as in "The Mountain Day" are powerfully imagined; others are autobiography at several removes, often based on ill-health (her own and others) or on events from her marriages ("A Country Love Story"). There is some bleak humour and a bitter wit, but few real laughs. Whenever the stories are set in England she - like Alison Lurie - gets details irritatingly wrong: nightingales sing in the wrong habitat; "bitter beer" becomes "dark ale". *Boston Adventure* (£4.95), her first and best-known novel, "lingers in the memory as one of those profoundly unusual novels that strike the readers as a discovery... a writer of high and melancholy talent," according to Anita Brookner's introduction. It's certainly clever and its poor-girl-to-rich-girl theme has echoes of Henry James. But not even James was as melancholy, as hope-less, as this.

Should an upper-middle class still exist, the late Sir Osbert Lancaster's autobiographical memoirs could, perhaps, act as a *vade mecum*. With an eye to the future (Century £5.95) comprises *All Done from Memory* (1953) and the 1957 memorial plaque to a vanished world "as the author has it). The first volume is witty, waspish in a Waugh-like manner, and utterly convincing. The second is occasionally repetitive, the nostalgia excessive, the tone often curmudgeonly. Memory's not so good, either: the yellow flood of the Left Book Club?

John Cheever has been described as "the most graceful American fiction writer after F. Scott Fitzgerald", which may be high praise. In *Home Before Dark* (Picador £3.95), a personal memoir by his daughter Susan, he is depicted as a complex character, a closet bi-sexual, a loving father and a dedicated (when not in drink) writer. Her achievement is to celebrate his death with a rare poignancy: "One moment he was still my father, the next moment he was a dead man." Between the two, the minutely chronicled a tortured life.

Barry Cole

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ARTS

Michael Bogdanov (director) and Michael Pennington (actor) went along to the Arts Council one day to ask, modestly, for enough money to finance a small-scale tour, perhaps a two-hander. The story of their surprise and delight at being asked to set up a major Shakespeare tour, the grant (£100,000) to do so and the subsequent generosity of their sponsors Allied Irish Banks (£65,000) has been told well and often. Come mid-September our two heroes were gracing a launch party at the Old Vic (Ed and David Morris having come up with £125,000) for the new English Shakespeare Company. They had collected together a stalwart group of 25 experienced actors and were off "on a wing and a prayer and a lot of bullshit" as Michael Bogdanov put it that day. It was time for the real work to begin. The chosen plays were *Henry IV*, Parts 1 and 2 and *Henry V* with Michael Pennington as Hal/Henry.

Both the Michaels (as they are familiarly known around the ESC) had a long-held ambition to stage these three plays in sequence, to present the sweep of English history over 20 years of the Middle Ages. Both have experience in the classics, including Shakespeare, and both have worked with the RSC and the National.

By October 1, after a couple of weeks of talking, rehearsals were getting into gear in a hall in Kennington in South London. Bogdanov works experimentally, trying things out, taking account of possibilities. He smiles a lot, enjoying the verbal and visual gags he puts in, enjoying everyone else's just as much.

This particular Wednesday afternoon, the focus is on the famous tavern scene in *Henry IV* Part 1 where Hal and Falstaff play a familiar game, each taking the role of the King, Hal's father, to score points off the other in Henry's imagined words. It is a wonderful scene, full of the bonhomie of the tavern and affection between prince and old reprobate. But there is a breath of the cold reality to come when Hal will put aside time-wasting pranks, assume responsibility and reject Falstaff. The scene is tried several times, sometimes going all out for laughs, sometimes giving more weight to the sour note. Falstaff - John Woodvine, as yet paunchless - is enjoying himself. How much does he guess of the future?



June Watson (Mistress Quickly) and John Woodvine (Falstaff)

The king makers

Heather Neill on the new English Shakespeare Company

How much does Hal intend to let him know? Falstaff is thrown on his mercy when the Sheriff arrives to question him about the Gadshill robbery and Hal uses his position to save his friend. There are some good gags using musical instruments - Hal irritatingly keeps the Sheriff waiting while he listens to the flute - and June Watson as Mistress Quickly has the enviable capacity to laugh loud and loud and as often as the director requires. But no final decisions are made as to interpretation. A week later Michael Pennington says that this stage has now been reached: after talking and allowing things to develop decisions are being made rapidly, one after another. By now it is October 9, less than a month

to the opening in Plymouth on November 3. All three plays are being rehearsed simultaneously, morning, noon and night. The company is still in Kennington and by 9am one Michael is at a costume fitting, the other at a production meeting and a fight rehearsal is being set up for 9.30. Michael Pennington has half an hour to chat. He and Bogdanov both see the plays as "relevant", not least because Henry V's notion to "busy gliding minds with foreign troubles" recalls the Falklands War. Oliver's famous war-time film made Henry V a flag-waving recruiting piece. Can it be read as an anti-war play? "Oliver removed anything that reflected adversely on the character of Henry. The warring scene became a

love match with the element of political bargaining left out and the French were whey-faced wimps whereas they can be seen as civilized, cultured, proud, individualistic". But the Bogdanov/Pennington version will not be simple anti-war propaganda either. Pennington: "I've seen Henry V done as an anti-war play and it is boring. It does not allow you to feel emotion, so that the final effect is negative and bitter. The play constantly embarrasses you with unsettling images of pollution, but it lifts you from the gut - like the Last Night of the Proms." The aim is to examine the nature of patriotism, why and how people take sides and follow one runner rather than another.

Pennington says he is prejudiced in favour of Hal because he is bound to see events from his point of view. He sees the rejection of Falstaff as necessary and his earlier cultivation of him and his cronies as a source of strength. He will know more about his subject than ever his father did. But Falstaff must know in his heart that he is never going to be placed in a position of power after Hal's succession. "He always knows the cold wind is there, but he is expert at ignoring it. He deludes himself. Responsibility often involves personal sacrifice at a cost level: Hal is under pressure to perform."

Despite Part 1's popular strengths, the Hal/Falstaff scenes (they seem to meet in Part 2) and the "High Noon" opposition of Hal and Hotspur Pennington sees Henry IV Part 2 "the crowning glory of the sequence". He admires the comprehensive view of medieval/Tudor Britain at all levels of society and thinks the Shallow scenes are among the best that Shakespeare wrote.

The ESC hope for young audiences on their tour. Pennington describes the theatre as "an embattled art form, under threat from every quarter" and would like the company to attract to audience for the future. He sees the language as a barrier to their enjoyment only if it is badly handled. "The comedy can be made more accessible with 'strategic use of gesture' - which does not necessarily mean ludicrous mummery and mimicry. There will be workshops when the production is scuttled down, but plans are still vague."

Every Saturday during the tour, three plays will be given in sequence, all nine hours of them. Michael Pennington is enthusiastic about the relishing the chance to show his character "from the cradle to the grave" whole biography rather than stage parts.

Tour dates: November 3 - 15 *The Royal, Plymouth*; November 17 - 19 *New Theatre, Cardiff*; November 29 *Theatre Royal, Norwich*; December 1 - 6 *Theatre Royal, Nottingham*; December 8 - 13 *Theatre Royal, Hull*; February 2 - 7 *New Theatre, Leeds*; February 9 - 14 *Empire Theatre, Sunderland*; February 16 - 21 *Theatre, Leeds*; February 23 *Apollon Theatre, Oxford*; March 1 *Palace Theatre, Manchester*; March 14 *Hippodrome, Birmingham*.

No good, no evil

The Mission.
Various cinemas.
The Mission. By Robert Bolt.
Penguin £2.95. 0-14-009423-3

It is never an easy task to turn a novel into a film. The inevitable condensing, the translation of events into purely visual terms, is frequently at the expense of the book's argument. Especially when the novel deals, as *The Mission* does, with a primarily political theme, the attempt on the part of the novel's author, Father Victor General Alimandro, to preserve the beleaguered Jesuit order throughout Europe by allowing its missions in South America to be sacrificed in accordance with the Treaty of Madrid. The mission's independence and success as commercial enterprises, had aroused the greed and envy of local landowners, who further resented the dignity and freedom accorded there to the native Guarani, elsewhere throughout the colonies despised as slaves by the settlers.

The novel is written in a terse, compact style that is also familiar in much contemporary South American fiction - the bare telling of the tale. On the whole it is very effective. Nevertheless we learn a great deal about the European background of the major characters, what has led them to become who they are and the moral dilemmas they are currently placed in. It is a gripping and a moving read.

The film gives almost none of this background. As a result Mendoza's horrific murder of his young lover and the intensity of his subsequent remorse are largely unexplained. Father Gabriel, the hero of *The Mission*, is a man without a history, miscast and far too young in the person of Jeremy Irons. Robert de Niro does



Mendoza (Robert De Niro) is met by the Guarani Indians

what he can to uphold the character of Mendoza and makes a good job of it despite much of the time playing in a vacuum. Cherie Lunghi as the woman he and his brother love and Mendoza kills for, appears too old and sexually experienced for the role, and the Guarani are presented as one big happy family as long as they are left to their own and the Jesuit's devices. But none of this overcomplication is the real reason for the disappointment. With which I left the cinema, Putman's well known desire to make films of large scale and significance is wholly admirable. So is his wish to move, to divert and to enlighten his audience. But despite the authenticity of location and character, something goes wrong. We are indeed directed and moved, to tears. The images are often breathtaking. But there is a sogginess at the core. The camera work with its juxtaposition of great close shots and spectacular panoramas so reminiscent of the best

of advertising, the sentimentalizing of the Guarani and the gentle Gabriel because no shades of good or evil are permitted, destroy the sense of struggle and severely weaken the argument, most effectively embodied in the papal legate and Montez, the Portuguese representative, played by Ray McAnally and Ronald Pickup respectively.

Is it that the film makers, caring passionately for their cause, have too little respect for their audience not to descend to manipulation? One thinks of Brecht always insisting on his audience remaining critically alert. Here we emerge from an orgy of identification neither purged nor enlightened, exhausted without being satisfied. And Enrico Moriconi's stirring portage only adds to the effect. Robert Bolt's novel offered the chance for something better.

Jane Corbett

Savages

Dog. By Dennis Scott.
Commonwealth Institute

Caribbean plays that have made their way to Britain have, from early days with *Moon on a Rainbow Shawl*, tended to be detailed pieces of social realism. All the more refreshing then to come across Dennis Scott's *Dog*, put on by the new Pan Caribbean Theatre Company as one of the closing events of the Caribbean Focus. *Dog* has little truck with realism. It inhabits a world in which the boundaries are blurred and in which you can never be quite sure whether the dogs are human or the humans are really dogs. That ambiguity in itself is maybe not particularly original - the discovery of the bestiality of man is not new - but what is particular to Scott is the way in which he extends the metaphor.

The dogs, when we hear the wealthy couple, owners of the smart house in which *Dog* is set, fearfully discussing

them, are just that - savage wild dogs roaming the streets and baying havoc. But they are also the abused poor, turning on their masters. The younger dogs, hiding by their rubbish bins, new and wounded mother, snarls, yelps, fawns in a way that could, dammingly, be both canine and human. Tamed by the bored lady of the house, tamed and collected (to the concern of her stolid purveyor, the only one in the household to have any sense about what was going on) until blood proves stronger.

The cast - all drawn from different Caribbean countries to make up a new and pioneering venture - will try to discover a completely new way of performing. Individual performers are strong - Ostene, a captured youngster, for instance, suggests both danger and terror effectively. Trevor Nairne's moving change from dog-state to human, keeps a dog edge to events which under less capable hands could have, unfairly, seemed ponderous.

Naseem Khan

Lifeline

Hard Times.
Theatrical Powys.

On the day that Kenneth Baker announced the establishment of new technical schools, Theatrical Powys gave vocational education a punch on the nose by presenting the shortcomings of its 19th-century caricature, the Gradgrind system in Dickens' *Hard Times*. "Education should not be for work, but for life," said writer Greg Cullen. "Too much of our schooling denies human potential." Calling for more creativity and "learning through feeling" was the essence of his adaptation of the novel. The plot was simplified and condensed into two-and-a-half hours. Setting it in a circus both unified the action - the narrative was kept flowing by the circus folk - and

emphasized the importance of learning through entertainment. The play was a potted guide to the Victorian class structure ranging from Gradgrind to the wronged and maligned weaver, Stephen Blackpool. Just six actors played all the parts: a change of voice and jacket saw Stephen become Seary (John Ballington) transformed into the confident banker Bounderby. Walking on stilts, he became the tyrannical teacher Mr Chookumchild, towering over terrified children.

The play is being performed throughout Wales and the border counties. But unless more funding is forthcoming, this may be Theatrical Powys' last national tour. Times will be hard for the company as well as the hard for the country as a whole. The play could be viewed as an eloquent statement of the continued survival of TIE as a form in schools.

Iola Smith

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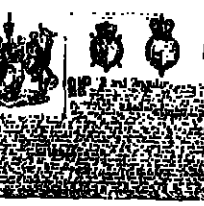
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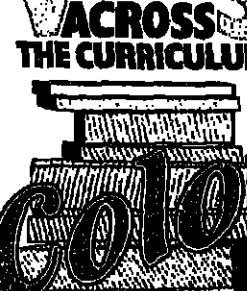
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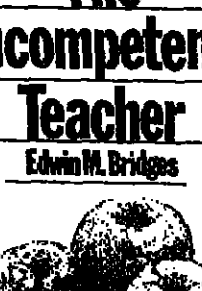
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EDUCATION AND SOCIAL CLASS

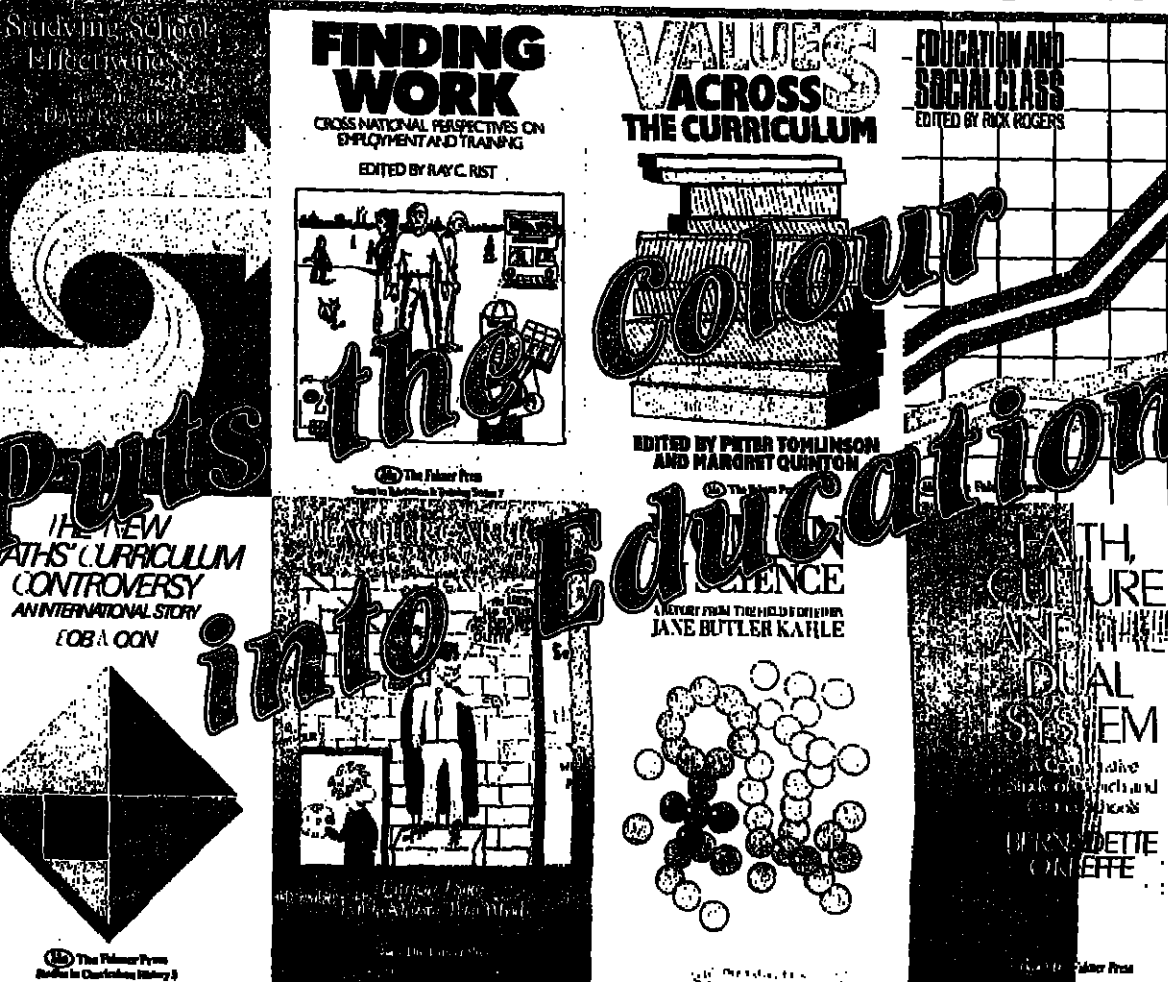


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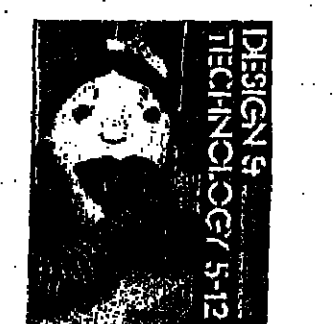
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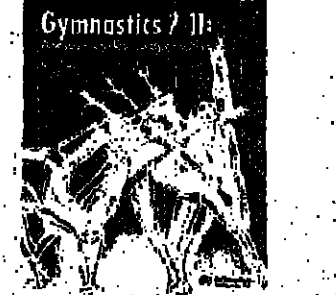


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John Brierley, *formerly HMI Staff Inspector*

Evidence is used from brain studies to demonstrate the young brain's potential, flexibility and resilience and to highlight the crucial importance of the preschool and early school years to later development. The study supports the move for more and better opportunities for children in the crucial years from birth to seven.

Contents: Introduction; The Brain; Habits and Skills; Myelin and Early Learning; Growth Pattern and Learning; Crucial Three for Learning: The Time of Speech; Double Brain; Learning by Playing and Exploration; Remembering; Learning and Thinking; What We Were Born With; The Twenty Principles; Conclusions.

1987 110pp Price £6.75 (Paper)

Putting Children First: A Book of Writings by Mla Kellner Pringle

Ken Fogelman, *The City University London*

Contents: Are Parents Necessary? Young Children Need Full Time Mothers; Low Cost Day Care; Preschool Comprehensive; Cooperation in Child and Family Care; Deprivation and Education; The Educational Needs of Deprived Children; Better Adoption; Whither Residential Care?; A Ten Point Plan for Foster Care; The Needs of Handicapped Children and Their Families; Towards the Prediction of Child Abuse; The Roots of Violence and Vandalism; Intermediate Treatment; Towards a Caring Society; A Policy for Families - or for Children; Putting Children First; Ten Child Care Commandments.

1987 226pp £16.95 (Hard) £9.50 (Paper)

Rethinking Active Learning 8-16

Norman Bewick, *formerly University of London Institute of Education*

This book looks carefully at new information technology (micro-computers, Prentel, videodisc etc) and argues that it is best planned for in the context of enquiry and exploratory learning, rather than prescriptive teaching. Emphasis is on 'learning for the new information world'.

Contents: Information Systems and Education: The Context of Change; Students Active and Intuitive: A Question for Curriculum; Projects: Knowledge Bought and Used; These Literacies for a World of Change; The School as Library; Computers in Context; Next Steps, For Teachers and Those Who Help Them.

1987 160pp £13.95 (Hard) £8.75 (Paper)

The Labyrinths of Literacy: Reflections of Literacy Past and Present

Harvey J. Graff, *University of Dallas, USA*

This book offers new and original views of the pressing topic of literacy. It discusses approaches to understanding literacy, the relations of literacy to society and economics and demography, and the links between literacy and criminality, among other key subjects.

Contents: The Legacies and Contradictions of Literacy: Reflections on the History of Literacy; Overview, Critique, and Proposals: The Ideologies of Literacy, Past and Present; Critical Approaches in the Literacy Society: Relationship: Literacy and Social Development in North America: On Ideology and History. The Social Relations of Literacy, Literacy, Education, and Fertility, Past and Present: A Critical Review; On Literacy in the Renaissance: Review and Reflections; Literacy in History: Review Essay; Respected and Profitable Labour: Literacy, Jobs and the Working Class in the Nineteenth Century; 'Puritanism, Misery, and Vice': Literacy and Criminality in the Nineteenth Century; Literacy in Literature and in Life: An Early Twentieth-Century Example; On Literacy: Review Essay, Part IV: Ends and Beginnings. The History of Literacy: Toward the Third Generation.

1987 250pp £16.95 (Hard) £9.50 (Paper)

Learning Disability: Dissenting Essays

Edited by Barry M Franklin, *Kennesaw College, USA*

The purpose of this book is to capture in one volume some of the best work by researchers in the field of learning disabilities.

Contents: The Gifted Learning Disabled: The Politics of Contradiction; Mares Sapientia; The Educational Irrelevance of the Concept of Specific Learning Disabilities; Michael Warner and Kay Bull; A Life in the Day of an LD Student; Denise Triessens; Learning Disabilities and the Problem of Organically; Joan Goodman; Hans Werner and Alfred Staus; Rethinking the History of Learning Disabilities; Barry Franklin.

1987 200pp £15.95 (Hard) £8.50 (Paper)

RE-Readings: RE in the School Curriculum

Rosemary Wilcock, *Rosehampton Institute of Higher Education*

This book brings together extracts and articles fundamental to the past, present and future debates about religious education in Britain. As such, it informs and illuminates discussion about the aims, intentions and practice of religious education across the whole school age range.

Contents: Historical Legacy; Curriculum Development in Religious Education; The Place of Commitment; Religious Education and the School Curriculum.

1987 226pp £16.95 (Hard) £9.50 (Paper)

Language and Learning: An Interactional Perspective

Edited by Gordon Wells, *Ontario Institute for Studies in Education, Canada* and John Nichols, *formerly of University of East Anglia*

This collection of original papers about language and learning is important to all who work in the area of education. It aims to be a volume of all aspects of the subject, dealing with language and learning at home and throughout the whole period of schooling and beyond.

Contents: Introduction: Language and Learning: An Interactional Perspective; John Nichols and Gordon Wells;

Language and Learning - An Interactional Perspective. Gordon Wells; Imaginative and Language - Play and Paradoxes: Some Considerations of Imaginative and Language. Margaret Week; Discourse Development: Beyond Lip Service: Discourse development after the age of nine. Terry Phillips; Language and Learning in Multi-Ethnic Classrooms - Strategies for Supporting Bilingual Students. Silvana Wiles; Children's Difficulties in Learning to Write. Carl Barrett and Mariela Boardman; Young Children's Conception: Young Children's Learning of Punctuation. Courtney B. Cadden, Patricia Cordeiro and Mary E. Glacoba; Language Assessment and Language Teaching - Innovation and Interaction. Tom Gorman; Language as a Social Activity - Socio-linguistic Development and the Mature Language User. Different Voices for Different Occasions. Gunilla Kross.

1985 166pp £6.95 (Paper)

Contemporary Analysis in Education Series Volume 7

New Directions in the Study of Reading

Edited by Margaret M Clark, *University of Birmingham*

New insights into the process involved in learning to read are being gained from detailed analyses of young children's early encounters with print, from a study of adult and fluent readers, and from the study of the features of print. These and related issues are explored in this book.

Contents: Introduction; Margaret M. Clark; Oral and Written Language: Similarities and Differences. Language Prerequisites for Reading. J. McInnes; Language Skills and Reading: A Developmental Perspective. M. Donaldson and J. Reid; Language and School Failure: Some Speculations about the Relationship between Oral and Written Language. M. Harris; Reading and the Language of Reading. The Child's Understanding of the Functions and Processes of Communication. J. Downing; Some Factors in Preschool Children of Relevance to Learning to Read. W. Sutton; Predicting Factors in Early Literacy: A Case Study. M. Van Lierop; Reading and Writing: Reciprocal Relationships. The Relationship between Oral and Written Language: The Children's Viewpoints. E. Ferriter; Cognitive Processes in Spelling and Their Relevance to Spelling Reform. U. Frith; Writing and Reading: A Marriage Between Equals. J. Barr; The Language of Print. The Intermediate Skills Revealed. J. Merrill; Literacy is Not Enough. J. Pearce; Reading: Effective Communication Through Text. G. Lewis; Literacy Learning. Parents as Teachers of Literacy. M. Kemp; Language and Concepts: Play or Work? Seriousness or Fun? Baines or Creativity? M. Jansen.

1986 184pp £12.95 (Hard) £5.95 (Paper)

New Directions in Remedial Education

Edited by Colin J Smith, *University of Birmingham*

This book is a reader for students, teachers and other professionals concerned with helping those children with learning difficulties.

Contents: Introduction; Colin Smith, 1. Assumptions About the Nature of Remedial Education. Whose Remedies, Whose Ills? A Critical Review of Remedial Education. Michael Golby and John R. Gulliver; The Teacher's Own Resources: Ronald Gulliver; Remedial Education Post-Warwick: Interim Report or Revival. J.S. Edwards; The Changing Role of the Remedial Teacher. Mike Lasker; Remedial Education: The Challenge for Trainers. Charles W. Gaine, 2. School Organization and Classroom Management. Slow Learner Provision in Secondary Schools: A Review of the NFER Research Project. Louise Charles-Rosen; Learning Difficulties in the Primary School: An In-service Training Initiative. Mel Atkinson and Jim Munro; Assessing the Advantages of Team Teaching in Remedial Education: The Remedial Teacher's Role. Neil Ferguson and Muriel Adams; Adopting a Resources Approach. Elizabeth Jones and Sandra Barriok; Helping

Colleagues Cope: A Consultant Role for the Remedial Teacher. Colin J. Smith; Pupil Assessment and Curriculum Development: Some Trends in Pupil Evaluation. The Growing Importance of the Teacher's Role. K.R. Connell; Teaching with Precision. Ted Raybould and John Smith; Recent Influences on the Assessment of Reading Difficulties and the Concept of Specific Difficulties. Robin C. Richmond; Towards Success in Mathematics. Alan A. Williams; Teacher's Involvement in Curriculum Change. Mike Hinson; Beyond the Sere-toothed Curriculum. Paul Widdie.

1986 210pp £14.95 (Hard) £7.95 (Paper)

New Directions in Geographical Education

Edited by David Boardman, *University of Birmingham*

1984 226pp £15.95 (Hard) £8.50 (Paper)

Studies in Religion and Education

John M Hull, *University of Birmingham*

1984 290pp £16.95 (Hard) £9.50 (Paper)

Issues in Educational Drama

Edited by Christopher Day, *University of Nottingham* and John L. Norman, *Newcastle Polytechnic*

1984 197pp £12.00 (Hard) £5.25 (Paper)

A Vision of Dynamic Space, Rudolf Laban

Compiled by Lisa Ullmann

1984 130pp £18.00 (Hard)

Living Powers: The Arts in Education

Edited by Peter Abbs, *University of Sussex*

The essays in this book bring together, for the first time, the histories of the several arts - literature, dance, drama, film, music and the visual arts - within the school curriculum.

Contents: Confronting the Crisis Within the Arts. Towards a Coherent Arts Aesthetic Peter Abbs. The Arts in Education: Their Collective History and Their Future Development. English as Aesthetic Initiative. Edwin Webb; Towards the Condition of Music. Marlan Metcalfe; Film is Dead: The Case for Resurrection. Robert Watson; The Dynamic Image: Changing Perspectives in Dance Education. Anne Haynes; Rites and Reunions: A Reconstruction of the Development of Drama in Education. Christopher Hewitt; Towards a Shared Symbolic Order. Robin Morris; Into the Future. A Brief Concluding Manifesto. Peter Abbs.

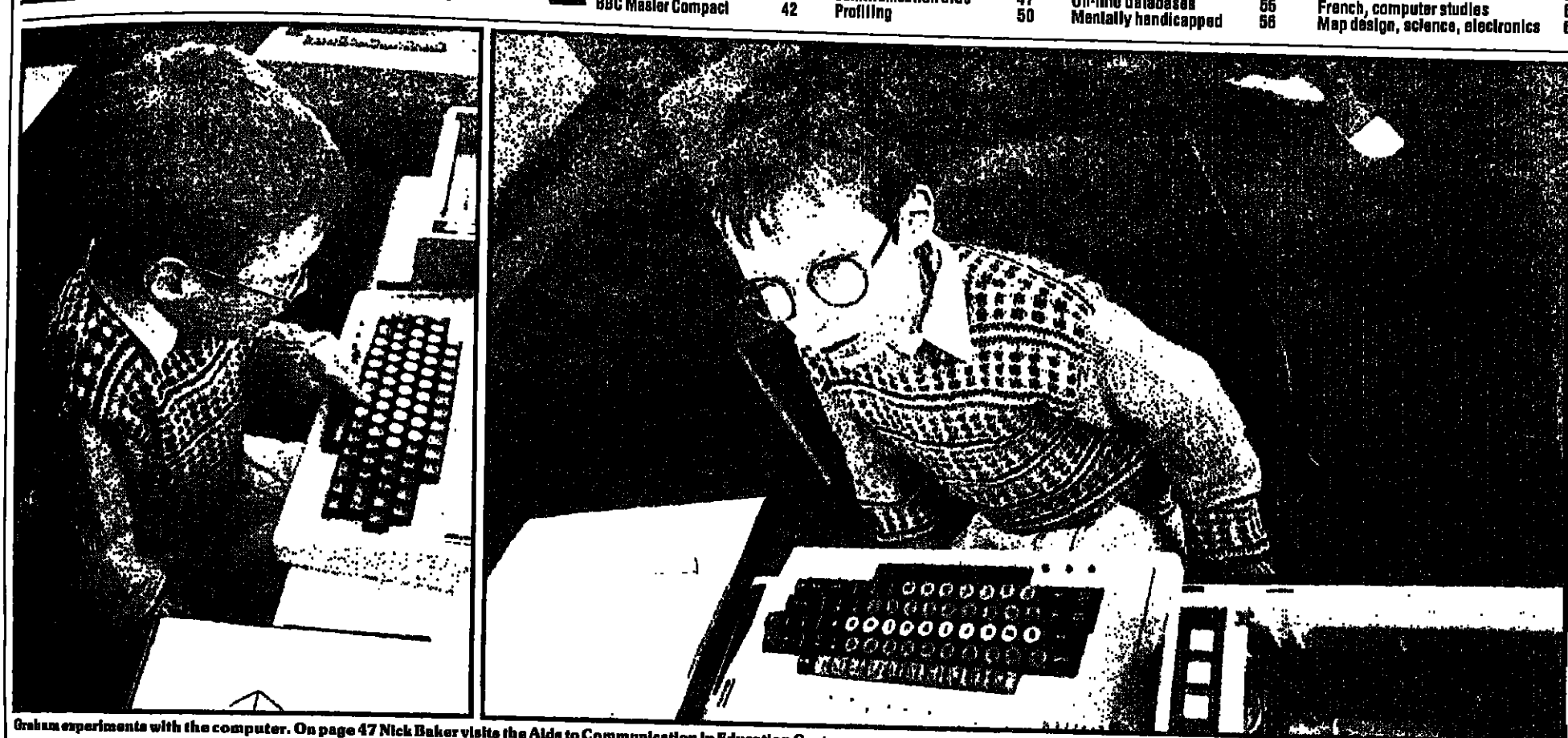
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Peace Through Education: The Contribution of CEWC

Derek Hoiler, *formerly Brighton Polytechnic*

1984 225pp £14.95 (Hard)

EXTRA COMPUTERS



Graham experiments with the computer. On page 47 Nick Baker visits the Aids to Communication in Education Centre.

MESU - a good start but a long way to go

Where next?

MIKE THORNE

Last July, more than 50 teacher trainers involved in educational computing met at Newman College in Birmingham. Their topic was "where next?" and it is a signal that the first day of this conference was virtually taken over by Microelectronics in Education Support Unit personnel who were anxious to promote participants a more important role after the demise of the Microelectronics Education Programme.

In its concern to encourage grass roots development, MEP had all but ignored the majority of teacher training institutions, a situation which MESU intends to rectify. At the same meeting a new association (ITTE - Information Technology in Teacher Education) was formed with the aims among others: to co-ordinate relevant communication between teacher education establishments and other bodies; to promote the use of IT in establishments of Teacher Education; and to assist in the formulation of policy for the development of the role of IT in teacher education.

These aims draw attention to some pressing problems for MESU. What, for example, is to happen to some of the excellent full time diploma courses in educational computing now available - Newman College runs one which has trained several advisers - in the light of the new INSET proposals? Where is funding to be found which will allow teacher training establishments to invest in technology such as satellite TV receivers? Work going on in Lincolnshire and Wales (to name but two) suggests that linguists might find the foreign language television transmissions an important resource, but without leadership it is unlikely that the necessary thousand or so pounds per institution will be forthcoming. And how can we expect to break the monopoly held by the final year junior in primary schools and the science/mathematics departments in secondary schools over a school's micro-

or two computers if the same problem exists in the training establishments? It should be borne in mind that the amount of money needed to give every subject section its own machine would be relatively small, and election year is round the corner.

Such a move could eliminate another problem of which MESU will surely be aware, which is perhaps best illustrated by the story of a friend of mine who went to give an INSET course to some chemistry teachers. He planned to start the day with *Quest* (perhaps one of the longest surviving content free CAL packages - and then move on to newer, less familiar software. Yet the chemists had never seen nor used *Quest* before. Of course, they soon realized its potential and were quickly developing ideas for its classroom exploitation. The rub finally came, however, when my friend discovered that their i.e.a. did in fact have a licence for *Quest* for all schools in that authority. Its existence had simply not percolated through to these chemists.

A related problem is what I call the "iceberg problem" for software. Many of the larger CAL packages are not being used because of the amount of teachers' time needed to find out just what pupils may get out of them and to gain enough confidence to use them. What is needed is a modern equivalent of the old-fashioned answer book - NOT, in this case, giving the answers but making it very clear just exactly how program X might fit in with Scottish Maths 3 etc.

At the secondary level, it may be that a close relationship between MESU and the exam boards might encourage the subject areas slow to make use of IT. Just imagine the effect of mentioning a piece of software in the syllabus!

MESU never publicly decided

whether it was encouraging computer studies or not. But towards the end of the Programme's life their "Computer Education" team was finally given its head. It would be a great pity if this effort was allowed to go to waste. Here at last was a group of people capable of bringing computer studies (and the relevant exam boards and subject panels) up to date.

They wanted the subject to be active (much of even GCSE Computer Studies is still not) and be precise in its terminology. Software was written concerning genuine database systems - not information retrieval packages - and software tools were explained by providing a set for pupils and teachers to use. At the very end there was an excellent pilot study of expert systems.

Much the same goes for the Reading University Computers in Music Centre which began fairly late on in MEP. It would be sad, especially in the light of GCSE music's emphasis on performance and composition - if the work done there were not able to reach a wider audience.

Of course, MESU will have to spend its very limited budget carefully. But it should also see itself as a broker and try to spend other people's money for them. It could also offer a service (for a fee) to those companies working on interactive videodisc software. As one adviser put it recently, much of this is home grown software: you GROAN because it contains all the mistakes of the early days of straight CAL.

Finally, the danger of any brief which includes the word *consolidation* is that it will lead to the production of a large number of lists. Some lists of software may be necessary but what is really needed are more shows of classroom work brought to other teachers and more time for us all to play around with existing materials. Logo, for example, hasn't been given a mass classroom trial because the necessary training facilities have not been available and the same goes for most other content free software in particular.

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Chapter and Verse Bookshop Ltd,
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Cardiff CF1 2AF

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Watford WD1 7AR

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Professional development and information technology: a progress report

Strategies for professional development - we have tried them all over the last five years - or have we?

It is clear that the exceptionally rapid advances in the field of information technology have led to a growing experience of need for radical responses from the teaching profession if we are to remain part of the real world in which children will live and work. The Microelectronics Education Programme (MEP) was a bold attempt to come to grips with the opportunity and much has already been written and said about its success and failures. I am not going to stand judgement on the programme but merely to observe that it gave us the opportunity of exploring a whole range of what was tried and leave teachers to judge the effectiveness for themselves.

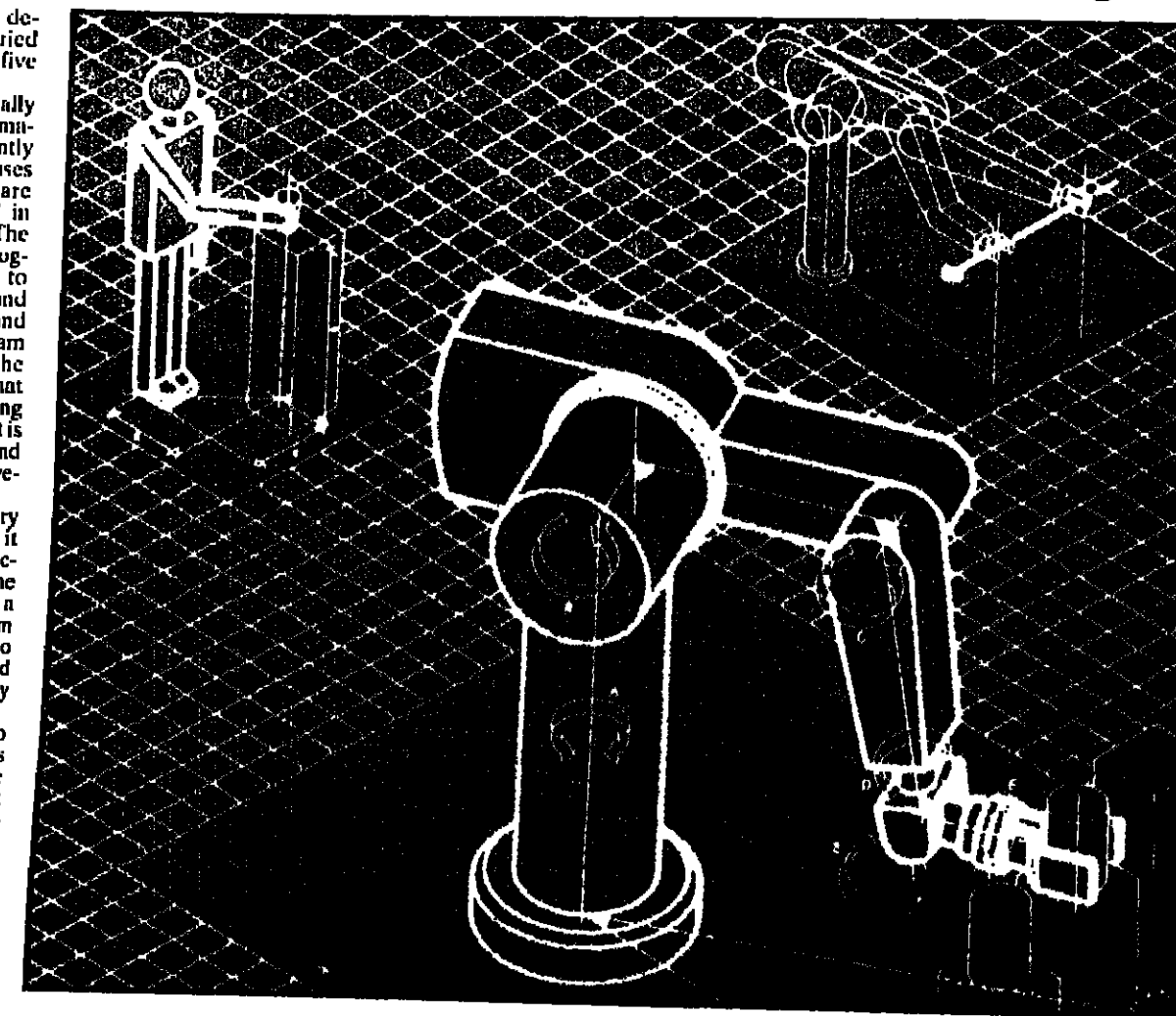
The MEP had to respond very quickly to the demands placed upon it by the Department of Industry's Micro in Secondary Schools Scheme. The pound-for-pound offer was linked to a requirement that two teachers from each recipient school were required to attend an i.e.a. awareness course based on the INPUT materials developed by the MEP.

The box of resources produced to support the teachers and the i.e.a.s was remarkable in that they were made available in an extraordinary short space of time, generally worked on two very different micros (the Research Machines 380Z and the BBC Acorn Model B) and teachers were actually able to take materials home which included software samplers and easy-to-use machine tutorial guide.

This initiative was followed closely by a similar scheme for primary schools supported by a set of INSET materials versioned for three machines (the Sinclair Spectrum was added to Acorn and RML) known as Micro-Primer.

The software included was somewhat dubious but the excuse made was that it was the best that could be found for younger children in the short space of time available. I.e.a.s were swamped with applications from over 50,000 primary teachers eligible to attend short courses in support of Micro-Primer - which was essentially a distance-learning resource pack.

Neither INPUT or Micro-Primer offered much more than some familiarity and awareness in the use of microcomputers in the classroom and one outcome of both packs was the demand by teachers for more support. Indeed, it could be said that those early



Old strategies and new strategies

MIKE ASTON

materials created more problems in the area of professional development than they solved, in that MEP were not in a position to assuage the thirst for more.

Meanwhile the Open University, funded by the MEP, was slowly de-

veloping a number of distance learning packs for teachers to work with at home, unfortunately, there was none

of the usual tutorial backup. The packs, of high quality and good value for money, were not well-publicized and many i.e.a.s were unable to offer any support for teachers who had purchased them.

The MEP network generally failed to have any clear policy for supporting the packs and they have now become part of history, being somewhat outdated and no longer supported by any agency. In retrospect it is evident that the OU did not move fast enough and failed to organize support services with MEP for teachers who had received one or more of the pack series.

Against this background of development in resource-based INSET, the MEP was striving to establish a cascade of courses in the four "domains" - Electronics and Control Technology, Communication and Information Systems, Computer Education and Computer Based Learning.

INSET Updates were regularly held with the regional coordinators by the four national coordinators in each of the domains. In some regions this strategy worked reasonably well, but as in any pyramid structure, there will always be weaknesses which will cascade as easily as the strengths.

The quality and quantity of support offered by i.e.a.s was also a major factor in determining whether teachers were encouraged to make effective use of the ever increasing range of hardware and software packages on offer by a host of publishers, i.e.a.s and the MEP itself.

Each of the "domains" generated materials to support INSET, but often these were under-resourced and the quality, of necessity, was very variable. In the "domain" for which I was responsible, Computer Based Learning, we had the high impossible task of supporting professional development across the entire curriculum except for the subject of computer studies/science itself. Demands came from such widely varied groups as road safety officers, religious education teachers, home economists and school librarians.

It is interesting to quote one regional coordinator in his end-of-MEP report: "I tried to run a number of day sessions (or two-day residential

courses) for staff for whom the opportunity of in-school INSET within departments would be limited, usually because there were too few of them in each school: economists, mathematicians, special needs teachers, chemists and others needed such treatment. Here a spin-off effect was the establishment of a network of communications for dissemination between the course participants after the course. Not quite a support network but at least something enduring in several cases."

This excerpt highlights the need to set up self-help networks of teachers with similar needs. This could be considered a high priority for i.e.a. subject advisers who can act as catalysts. Towards the end of the MEP, it was recognized that specialist subject panels could offer strong guidelines for the development of materials: the Secondary Maths with Micros, INSET Computer and Information Technology Resource Packs are good examples.

Traditionally, a number of agencies such as teacher training institutions, polytechnics and colleges of higher education offer longer courses, sometimes award bearing, such as Diploma in Computer Education and the RSA. These last up to two years, perhaps a day/evening a week basis. Long courses do give teachers time to come to terms with larger software packages, control systems, communications networks and devices such as the VCL, and to develop their own curriculum materials with real groups of children.

The content of such courses has proved very patchy to date. A course on "Computer Education for Primary School Teachers", for example offered by a college that should have known better, presented the participants with a series of lectures on BASIC Programming. Perhaps it is proved as the weeks went by, but were there any teachers left on the course to find out?

The DES in its circular 106 has offered strong guidelines on the development of longer courses on information Technology (20-30 day spread over three terms). Support for teacher cover is offered to a wide link with higher education institutions where courses have been approved by HM Inspectorate, and although it is early days, the scheme appears to be working well. Teachers are given time to reflect on classroom style and management and are offered opportunities to visit other teachers' classrooms. This could prove valuable in passing on good practice. The DES courses, as they are becoming known, only started this last September and cutler for very few teachers at the moment. We are promised an expansion in 1987 and this initiative by the DES and HMI must be welcomed.

During 1985, two booklets were published, provoking considerable discussion among school staff. *Change in Perspective* is intended for secondary staff and the *Time To Reflect* for primary. Both ask a lot of questions and neither provide any of the answers. Questions like who should primarily support staff development - a colleague or an outsider? where would you prefer INSET activities to take place? In school or elsewhere? If you were head, what would you do to ensure support for those members of staff who showed interest in using a computer in their teaching? and when teachers attend courses, what arrangements are made for them to share their new knowledge and skills with colleagues?

Questions concerning professional development run through both booklets and anyone concerned about whole school approaches to IT should try to get hold of a copy of whichever is most appropriate for their type of school. During the last few months of the MEP, the DES sponsored another initiative which, although not directly in support of INSET and IT, will have long term implications for the nature of their implementation. I refer to the 13 Subject Critical Reviews which the DES commissioned, mainly to be published during this current year.

Each review has two broad aims - to identify the benefits that new technologies are bringing to the subject now and to speculate on what future is desirable and what needs to be done to bring it about.

continued on page 40

Prestel in Computer Studies

A quick guide to using Prestel for Computer Studies and Information Technology courses.

Prestel Education includes many specialist educational databases, designed for specific educational applications, such as the ECCTIS higher education courses guide, the Schools' Telesoftware service, or SEND, the Special Education Needs Database.

For many schools and colleges, the first use they make of Prestel is to demonstrate the system, in computer studies or information technology courses.

Does your school or college teach GCSE, GCSE or Scottish O or H grade, Computer Studies or Information Technology courses - or do you teach other computer literacy and IT awareness courses such as the AEB Computer Literacy and IT scheme, the AEB Basic Test in Computer Awareness, or the new two year VTS Computer and Information Technology core activities?

All these courses now include the use and application of viewdata systems, electronic databases or electronic mail as part of the syllabus.

A subscription to Prestel Education allows you to demonstrate the principles of viewdata, data bases and electronic mail, while at the same time showing practical applications already being used by thousands of people both at work and at home.

Prestel is a real world system. It is not a database of information contrived for children. If you have Prestel within the school or college, you don't have to make do with a simulation, but can show practical applications of Information Technology used in a variety of industries. The child using Prestel in school is using exactly the same system as, say, the professional travel agent in the high street. In using Prestel, the children gain first hand experience of a national information and communications system, and acquire skills that may be directly transferable to the workplace.

The "Pocket Guide to Prestel"

The Curriculum Matters database on Prestel Education includes a section on "Demonstrating Prestel", designed to help teachers provide an effective demonstration of Prestel in the classroom.

It covers, for example, the principle characteristics of Prestel:

Simplicity - no special computer skills needed to use it.

Scope - 300,000 pages of information, over 1,500 organisations providing information on the database, over 1,000 simultaneous users able to access the system at the same time, over 50 external computer services connected to the network.

Speed - instant response, rapid searching for information.

Interactivity - response frames to send messages or order goods, telesoftware, challenges.

Communication - Prestel Mailbox, Telex Link.

Attractiveness - simple and effective colour and graphics.

Economy - access to the system at local call telephone rates for over 99% of the population.

Immediacy - information updated at any time and displayed immediately on the system. News and prices can be constantly revised.

Communications

Prestel is much more than just an information service. The system provides extensive

communications facilities, based on the interactive telephone link between users and the Prestel computers.

Response frames are pre-addressed pages sent by users to an Information Provider. They are used extensively for simple messages and order forms.

Mailbox is the national electronic mail service on Prestel. Every user has a mailbox number which acts as their address. Messages can be sent at any time and are stored centrally until collected by the user. There is no limit on the number of messages you can send, or on the number stored by the system waiting for you to look at them.

The Prestel national mailbox index is on page 7. The directory of Prestel Education users' mailbox numbers starts on page 88804.

Telex Link connects Prestel users to the national and international telex network.

Messages can be sent to, and received from, anywhere in the world. Incoming telexes are addressed to a user's mailbox number.

Noticeboards are open access message services. Users send messages to the board's operator who then displays them on Prestel. Any reader can reply by sending in a notice of their own.

Examples include Prestel Education's "Hot Topics" on page 88882, the SEND (Special Education Needs Database) notice-board on page 515515, and EMBMAIL, a noticeboard for deal users (page 78718).

Bulletin Boards are fully automatic noticeboards. Users send messages which are automatically displayed on Prestel. This means you can hold a real-time conversation between two or more people. Micronet 800's challenges on page 811 are the most popular example.



A group of students using Prestel in the computer room at Holland Park Comprehensive School, London

Schools' Telesoftware

The first twelve months.

by Andy Terry, manager of Prestel Education's Schools' Telesoftware service.

The Schools' Telesoftware service was launched on September 27th 1985. It has become the UK's largest telesoftware database devoted entirely to providing the serving teacher with a large library of low-cost, high-quality software.

Downloading the software is easy. Full instructions are displayed on pages 88027 (BBC micro) and 88017 (RML). The programs are transmitted as a sequence of Prestel frames which are error-checked and then decoded by the school's terminal software and saved to disk or cassette for use in the classroom.

The service is open 24 hours of the day,

every day of the year and, unlike a computer centre or software shop, never closes or runs out of stock!

Five categories of software are available:

CAL, or Curriculum Support Programs - for a wide range of subject applications and age ranges. In any typical month there may be over 35 such programs available for the BBC micro. Programs are supplied by publishers at special discounted rates (usually 50%) or directly by the software publishing unit at Prestel Education, which aims to charge no more than 99 pence for any title. Most programs, however, include

over 75% of those currently available, are free of charge.

Programmers' Utilities - of special interest to school computer managers and programmers. Many come from the MEP software unit, others from MUSE or individual teachers.

Data Files - numerical and textual data for use with a variety of information-retrieval and word-processing packages. Many teachers are actively involved in the production of data files which they feel could be of interest to colleagues working in other areas of the UK. Telesoftware ensures that their work, and the work of their pupils, reaches an appreciative nationwide audience.

Free Samples - Publishers can make samples available free of charge to allow teachers to preview material before making the decision whether or not to purchase the complete product. As a means of soft-

ware distribution and as a marketing tool, telesoftware is quick, cheap, easy and convenient to use for both schools and publishers.

Microviewdata Datafiles - for use with off-line viewdata systems such as Microviewdata, CommuTel or Infolink.

Since launch, the service has been a resounding success, with over 85,000 programs successfully distributed. The amount of software written by teachers and pupils submitted to Prestel Education for possible publication is increasing steadily as awareness of the medium grows. Unlike a conventional publisher, the Schools' Telesoftware Unit can take a suitable program and (subject to classroom evaluation by up to 10 serving teachers) begin distribution within minutes of receiving the author's signature to a contract! If your school is producing good software, why not send it to us for evaluation and possible publication? There is even a monetary reward for good material!

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Just some of the 122 items for you this month from SCHOOL'S TELESOFTWARE:

GEOGRAPHY

Three programs from Andrea Tapsfield, published by Prestel Education:

Climate Graphs - free. Draws climate graphs using data stored on disc - *880220105 (BBC), *880120036 (RML).

Population Pyramid - free. Lets you draw population pyramids using data files stored on disc - *880220103.

Scatter Graphs - free. Lets you display graphs for two variables and investigate relationships - *880220151.

Data files for all three programs are also available from SCHOOL'S TELESOFTWARE.

MATHEMATICS

Mathematic Land (LTS) - £6.00. A mathematical adventure game full of problems to solve. Great fun, tool - *880220017.

Equations (Independent Software) - £6.00. Solve the given equation using any method - *880220128.

SCIENCE

Chemist (MUSE) - £6.00. Aids teaching of rules for the formation of ionic and molecular formulae - *880220042.

Resist (Prestel Education) - free. Colour coding on resistors - *880120014.

ENGLISH & MODERN LANGUAGES

Extrat Dombi data file (Shropshire LEA) - free. Simulates the flow of news into a newsroom - *880220003.

Catch A Word - £1.50. Language work, particularly investigating word meanings and groupings - just right for poetry and story writing exercises - *880220150.

Crossword (GSN) - £9.00. Crossword generator - *880220081.

PRIMARY

Mangon (MAPE) - free. The Greeks and Romans used a mangonol to attack their enemies. Use this simulation to learn about ballistics - *880220138.

Locks (MAPE) - free. Work the gates on a canal lock - *880220113.

ADVENTURES

Space Adventure (LTS) - £6.00. A problem solving adventure game set in outer space. Includes a language and maths/science game, but also lets you create your own - *880220059.

MICROVIEWDATA DATAFILES

Europe (MEP) - free. A country by country breakdown of the countries of Europe by land area, population, GDP and capital city. Covers 41 countries - *88030.

SPREADSHEET DATA

Disco Enterprises - free. Stock Control - Free. Pascal's Triangle - Free. Data files and worksheets for use with Peter Bishop's Alphacalc spreadsheet package for the RML - *880100055, *880100058, *880120023.

LOGO SOFTWARE

9 Programs written by Derek Radburn and published by Prestel Education. All free - *8802233.

PROGRAMMERS' UTILITIES

18 Utilities for the BBC and 6 for the RML. Most free. *88024 (BBC), *88014 (RML).

Southampton Institute of Higher Education and British Computer Society (Hampshire Branch)

Joint Seminar on INTELLECTUAL PROPERTY COMPUTER SOFTWARE AND ITS ILLEGAL ABUSES

Friday 21st November, 1986 Southampton

Programme:

The Copyright - (Computer Software) Amendment Act
Patents
Trademarks
Execution of Search Warrants
The White Paper 'Intellectual Property and Copyright'
The Protection of your Software Development

Booking form from:

Margaret Ross
Department of Management and Computing
Southampton Institute of Higher Education
East Park Terrace, Southampton, Hampshire SO9 4WV
Telephone: (0703) 226381 Ext 287





New strategies continued

The second aim is to offer advice and guidance to the newly formed Microelectronics Education Support Unit (MESU) through its Management Board. Already, some of these booklets have been widely circulated, others are still in preparation. They will prove a valuable resource for teachers and carry a message for INSET providers.

Overseas educational decision makers are beating a path to the UK door because word has got round that we have achieved more than any other country in assimilating new information technologies into our education system. This may well be true, but we have a long way to go yet and the future offered is one of accelerating change. Whether this is seen as exciting or frightening will depend on how the profession prepares itself for coping with change.

There is no doubt that radical action is required now and we must not sit back and assume that some other agency will present a solution. We are

not alone as a profession in having to come to terms with new technologies. Lawyers, doctors and journalists are three traditionally-minded groups that are also having to cope. Teachers should be setting the pace and using the opportunity to offer our children the benefits of learning by new ways.

Mike Aston was National Co-ordinator for Computer Based Learning in the Microelectronics Education Programme and is now Deputy Director of the Advisory Unit for Microtechnology in Education at Hatfield in Hertfordshire.

REFERENCES:
INPUT and MicroPrinter from TecMedia, Granby Street, Loughborough.
Micros in Schools distance learning packs from the Open University, Milton Keynes.
Change in Perspective and Computer Based Learning 1981-1986 from AUCBE, Endymion Road, Hatfield, Herts.

Time To Reflect from TecMedia, Granby Street, Loughborough. Subject Critical Reviews from appropriate subject associations.

Hands up for hands on!

My First Computer Library and Computer Club

Two attractive series of books which aim to provide an interface between the classroom computer and other project work for infants and juniors. Straightforward enjoyable programs are set out in both series, most of which can be modified. Software is available for Computer Club as listed below.

My First Computer Library
Interest range 6 to 9
Me and You
Colour and Shape
Growing Things
Living with Animals

Computer Club
Interest range 9 to 14
Birdwatch
Volcanoes
Robots
Navigation
Comets

Hardback
£3.95 each

Hardback
£5.95 each

Computer compatibility	BBC B	RML 4802	Spectrum 48K	Network adaptation
Computer Club books	•	•	•	•
Computer Club cassettes	•	•	•	•
Computer Club discs	•	•	•	•
My First Computer Library	•	•	•	•

Macdonald
A BPCO PLC company

The launch of the new IBM-compatible Amstrad has far-reaching implications

The battle is won

RAY HAMMOND

Amstrad's recent launch of a £399 IBM compatible PC may seem like nothing more than yet another marketing thrust by an aggressive company. But it promises to have an effect which will have wider implications - especially for education - than simply boosting a flagging micro market.

There have been lots of cheap IBM compatible machines available in the last six months - the Tandy corporation announced a £450 machine in the week before Amstrad's launch - and, by itself, the launch of a low-cost compatible should not have caused the national stir that it did.

But when Amstrad unveiled the long-awaited micro, the company enjoyed unrivalled publicity including banner headlines in the national press. A month later the city pages were filled with news of the company's record £47 million profit performance.

City analysts describe this unusual reaction to a company's products and performance as "the halo effect" and Amstrad are certainly in the position of enjoying almost messianic status in the high-tech commercial world.

The implications for education, both primary and secondary, will be enormous, even though they are not likely to become clear for another year or so. Despite the fact that IBM-PC clones had fallen in price even before Amstrad's move, it was not respectable to buy a cheap copy PC in an unmarked carton. The press had told us that cheap clones were often unreliable and were often hard to service. Until Amstrad's launch, a 512K PC-clone

was still selling for an average price of around £1,000. Now the public have the confidence to march into Dixons, Currys or W H Smith and expect to find a reliable business machine for £450 (including VAT) and expect to get some software with it.

It is this change in expectation on the part of the consumer which will most affect education. There is unlikely to be a rush on the part of schools to re-equip with Amstrad machines - the company has no educational sales or support structure - and a massive amount of reasonably new hardware for other machines is already in place in the classrooms.

In reacting to Amstrad's powerful marketing it will be the parents and children who will become the driving force of change in educational computing.

Pricing a 512K "industry standard" machine at below £500 effectively turns the home/business micro market on its head. Until very recently even a medium-power home micro system would cost that amount and business computing was measured in thousands of pounds, not in hundreds. Now all of the vast numbers who need some computing power for a small business, for social reasons or simply for the experience can contemplate putting an Amstrad in their home.

As competitors react to Amstrad's pricing policy, so consumers will be able to take their pick of Olivettis, Tandys, Compaqs, etc within the

same price bracket. Until very recently it was said that no executive ever got fired for buying IBM machines. The clever part of Amstrad's drive is that they have changed the market perception so that in future British executives may well get fired for wasting money on IBM products.

Interestingly, the British micro market is the most competitive in the world. The price of business computers is lower here (in both real and comparative terms) than in any western country and machines such as the Amstrad PC cost at least twice as much in the USA and in the rest of Europe.

As home buyers begin to equip with Amstrad PCs - and the success of Amstrad's PCW6256 wordprocessor in the home market has made clear that this price level does put machines into the home - so they and their children will begin to understand what PC-DOS, the IBM standard of business computing, has to offer.

There is a phenomenal range of software available for IBM-compatible machines and within a year it should will dominate secondary school computing. It will eventually permeate to primary schools and all levels of education to the extent that alternative computing standards, such as the BBC and Sinclair systems, will seem like museum pieces. Even if such standards continue to evolve, there is no way they can withstand the onslaught of £399 512K machines from major suppliers and the world's largest library of serious software to go with them. The battle is finally over and educationists need to acknowledge it.



MUSE '86

JACQUETTA MEGARRY

MUSE '86: Proceedings of the MUSE Summer Course July 1986, (£1.25). Published as MUSE Report No 9 by MUSE, PO Box 43, Houghton-on-the-Hill, Leics, LE17 9GX.

Many conference organizers base their published proceedings on papers presented by contributors. The result is usually a very dry, voluminous and usually a very little to be useful. By dispensing with the contributors and depending instead on anonymous but

clearly hardworking rapporteurs, MUSE has managed to produce a 32-page properly typeset set of proceedings in under two months. Editor Richard Green promises part II later this year with the balance of the proceedings.

Contributions range from the very general, such as Doug Brown's thoughtful piece about the "History of educational computing, 1965-1995" and Ted Wragg's "New technology in teaching and learning in the 1990s" to the highly practical, such as Richard Green's piece on the Acorn Econet and Colin Wells' on high-quality music now.

Each session has been reduced to somewhere between 400 and 500 words, and inevitably the standard of reporting varies widely. But it would be churlish to criticize something so cheap, cheerful and timely. If you were at the conference, it fills in the gaps between the sessions you missed; if you weren't, use it to catch up with where MUSE is now.



GORDON JONES
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THE TIMES
NETWORK
SYSTEMS

LISA HAWKINS
Aged 7, Tasmanian, Australia



TTNS TALKING TO YOU

TTNS is Keeping in Touch with more and more people in the world of Education. Over the past few weeks existing users have seen several new facilities on TTNS. The new Profiling facility can keep you up-to-date with the TTNS National Database. Profiling is easy to use and, once you have set up a keyword search in a specific database, whenever new information is loaded into that section you will be automatically sent the article in the Electronic Mail. Users can then find out all the latest TTNS news; print off any recent DES Reports and HMI Publications; implement a keyword search item for a Career outline of their choice on the TTNS Careers Database; or find topical news in French or yesterday's weather data from the Meteorological Office in their Electronic Mailbox.

Existing TTNS users can communicate electronically with IT enthusiasts worldwide. The only restriction is that the addressee must be using a Dialcom, Telecom Gold Compatible, service. The available countries at the moment are: Australia, Canada, Denmark, Germany, Hong Kong, Eire, Israel, Japan, Korea, the Netherlands, New Zealand, Puerto Rico, Singapore and the USA. Schools using TTNS are currently swapping cultural information with schools in Australia, California, Sweden and Canada. There is an additional charge of £4000 per annum, totally inclusive, payable in advance.

In the next month there will be several new commercial Databases going live on TTNS. British Rail will be extending the excellent work they are currently running on the TTNS Primary Database with their RAILNET Database. RAILNET will consist of interesting classroom material about railways of today and tomorrow, free resources and prize competitions. Nine separate organisations make up the contributions to a Database representing the Engineering Industry. This Database encourages students to consider a wide range of exciting careers available and gives full details of lectures, careers events and new educational resource materials. The AMI Health Care Database gives valuable insight into a unique industry, one which concerns itself with a variety of unusual, but important, health problems. The Database involves interactive quizzes which encourages working towards a Healthy Lifestyle.

On November 21st the TES has an EXTRA section dedicated to Primary Schooling. In that section TTNS will be outlining how Computers in Primary are high on their agenda.

BRIEFCASE - helping with Understanding Industry

We all learn more effectively when taking a full part in an activity. With this in mind, Understanding Industry (UI) in association with British Rail, has recently published 'Briefcase' - A Manual of Short Business Exercises. Teaching staff report that 'we like UI courses, especially when students PARTICIPATE in exercises which highlight aspects of business.' The 'Briefcase' manual - consisting of 25 exercises for 16-19 year olds - provides such participative material. It helps managers give an effective message about industry when visiting schools and colleges, as well as being of value for teachers and lecturers.

TTNS will shortly carry UI's database which will fully document its objectives and activities. Meanwhile if you would like more information about Understanding Industry or 'Briefcase' contact TCD100078.

Show off your I.T. artwork and Design a Christmas Card

TTNS is asking you to combine your imagination with your Information Technology skills. We would like you to design a Viewdata Christmas Card to wish all the other TTNS users a Happy Christmas. There will be a separate prize for Primary and Secondary entries. The prize will be a Times Concise Atlas of the World. The closing date is December 8th, all entries should be sent to Helen Milner on TCD004. An example of a card is on the TTNS system - users can display this by typing CARD at the system prompt.

You can find out more about this, and other Competitions, on the Competitions section of the TTNS National Database. Other examples of Children's Viewdata artwork are available on the Gallery section of the Primary Database.

For further information please call the TTNS office on one of the numbers below or complete the form. TTNS are waiting to TALK TO YOU ... Any member of staff at TTNS would like to answer any query you may have, please telephone on 01-833 7104 or 01-833 7615

I would like further information about The Times Network Systems Ltd. I am specifically interested in (please tick one of the following):

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Please return to TTNS, PO BOX 7, 200 Gray's Inn Road, London WC1X 8EZ.

The TTNS Careers Database is expanding all the time. Since it is fully keyword searchable the user can search for a career, eg: baker, or a job and an area, eg: baker in London. Or the user can search using the CLCI Careers Library Classification Index for the Category Index or the classification symbol.

With the advent of the GCSE exam TTNS is making the National Database more practically applicable. Schools can communicate with other schools on Project Work; and use printed news in French, German or Spanish to improve their language skills and understanding of European Culture.

A Head Teacher uses TTNS to communicate with his Local Education Authority. With the speed and efficiency of Electronic Mail an LEA can keep in touch with Advisers and Heads wherever they may be. With facilities such as the interactive form LEAs can maintain every school in the Authority with very little fuss.

They Higgins and Alan Paul look on as Jennie Bowers updates the information in the PCAS Database. Over the summer hundreds of expectant TTNS users keyword searched the PCAS Database, anxious to find a last minute place in one of the Polytechnic courses on offer. Plans are underway for expanding the service.

The Edmail Pack is just one of the Support Packs TTNS has on offer. Edmail is an online simulation of the TTNS mail service - so you can learn how to use TTNS without using the telephone line (cost £25). There is also a Primary Support Pack which includes a cassette and slides for £40. For anyone wishing to set up a Local Database, there is the LEA Systems Manager manual for £15.

THE TTNS CAREERS DATABASE



PARLEZ VOUS FRANCAIS?



USING TTNS FOR ADMINISTRATION



LOADING OF THE PCAS DATABASE



OPENING THE EDMAIL

A look at how the computer can be used to further 'real world' relevance in GCSE science.

Scientific relevance

After a somewhat turbulent development period the new GCSE science and other related subject examinations are being implemented throughout the country. There is a general acceptance that the aims and assessment objectives for these examination courses are laudable. However concern is being expressed over the ways in which they can be implemented.

This article first provides a general overview of such aims and assessment objectives. It then outlines some forthcoming software for the BBC microcomputer, concerned with computer monitoring, which is intended to provide teachers with a means by which they and their students might achieve them.

The GCSE National Criteria for Science set out the following aims for these subjects:

● Encouraging the adoption of a positive attitude towards curiosity and scientific enquiry.

● Promoting an appreciation of the importance, and relevance, of accurate experimental and investigatory work.

● Developing observational, manipulative and experimental skills appropriate to the subject.

● Developing skills of recording, processing and interpretation of data, evaluation of evidence and formulation of generalizations and models.

● Developing students' abilities to form hypotheses and design experiments to test these hypotheses.

Similarly the practical assessment objectives of such courses include the need for experiences which will enable a student to show that they can:

● Solve problems by designing, conducting and interpreting the results of simple experiments.

● Take accurate measurements and record them in a concise and logical form.

● Plan and organize simple experimental investigations the data from which can then be used to form or test hypotheses and deduce relationships.

● Carry out experimental tests to check the validity of data, conclusions and generalizations.

On studying these aims and assessment objectives it becomes evident that computer monitoring (if made simple enough) could have an impor-

tant part to play in their realisation. At Sheffield University Division of Education a project has been underway to ascertain the best way of achieving such an outcome. The project's credibility is based on the aims and assessment objectives within the GCSE framework.

Monitoring physical and chemical changes is a common enough sight in school laboratories. Measuring temperature changes using thermometers, or voltage differences using a voltmeter are standard activities.

Over the last few years there has appeared on the market a range of materials which have been developed in an attempt to encourage science teachers, and to a lesser extent pupils, to monitor school laboratory experiments electronically. Monitoring in this way requires electronic sensors to be coupled to a collection device which will store, process and display the experimental changes (Figure 1).

However it is evident from discus-

CLIVE OPIE

sions with teachers and observations of schools that despite all the available materials the uptake of such work has, to all intents and purposes, been minimal.

The project has highlighted two major reasons for the inactivity in this field namely: first, that, although articles existed which gave instructions on the building of sensors, lack of teacher time and 'building skills' tended to mean that little was produced. Second, there was no easy to use, well designed software which was readily available and which would allow the display of the sensor readings in a useful way, ie showing exactly what is being measured.

It is important to note that it was not an unwillingness on the part of teachers to get involved. Swift (1985) in his survey of a number of schools

noted that "All the science departments saw the interfacing of the computer to the 'real world' as an important future development".

On investigation it was found that "off the shelf" sensors ideally suited to computer monitoring were available from Philip Harris Ltd. However, whilst clearly lacking in suitable software, So, using the Philip Harris sensors, software has been designed which is easy to use and requires minimum input (in some cases only three key presses) before actually being able to start monitoring; can be used by both teachers and pupils; displays exactly what is going on (the x-axis is always time), with rescaling etc, being a later modification; and allows up to four similar sensors to be used at once. It also follows similar patterns for different experiments; has facilities, eg saving and loading data; printed out graphs which are easy to invoke and are not written in "computer jargon" and will allow data sensed by the VELA through Philip Harris sensors to be displayed.

This software is presently undergoing trials. Even though the software is still in its development stages speculation has already been made on its potential for the realization of the assessment objectives of GCSE.

For example, surface area and heat loss is a topic covered in biology teaching which could benefit from this project. Taking the statement that "Big animals lose heat less quickly than small ones" students could devise their own experimental set up (eg different size tin cans filled with hot water) and monitor temperature changes over a period of say 30 mins and could extend the experiment further by getting the students to think of using various coverings, eg feathers, fur.

This type of experiment has implications for similar work in physics, eg testing different types of insulation,

measuring rate of heat transfer from black/silvered surfaces.

Similarly, pupils could be encouraged to design and carry out experiments which would provide evidence about the best conditions for photosynthesis. The oxygen probe could be used to quantify the amount of oxygen being evolved from pondweed during photosynthesis and then students could study the effects of varying the wavelength of the light falling on the plant or changing the temperature of the water or adding substrates to the solution.

Students could also undertake projects to monitor pH changes in enzyme reactions, titrations or in a study of the role of buffer solutions.

Collecting information on current and voltage changes on inductive and resistive loads becomes straightforward using the voltmeter and ammeter sensors.

These few examples show how students could design and conduct simple experiments and accurately collect data from them. They could then use such data to test hypotheses and deduce relationships or indeed check the validity of data. In other words the students will have the means of being able to realize the assessment objectives of GCSE science listed above.

The project materials are comprised of the software and a set of easy to understand information sheets on how to use it and all of the sensors catered for. Therefore purchase of the sensors (and a connection box to the BBC if one is not to hand) and the project materials should enable the beginner to get started in the field of electronic monitoring.

The materials will be launched at the next ASE Annual meeting which is in Cardiff from January 2-3, 1987 and shortly after that they will be available from Philip Harris.

Even at this early stage we are hoping that the use of "standard" materials will allow the cross fertilization of "good practices" to occur.

Clive Opie is Project Director and Lecturer in Education Information Technology at the University of Sheffield. Reference: Swift D G in *Teaching Computers and the Classroom* (ed) and Rushton J (eds), Manchester University Press, 1985.



A standard activity

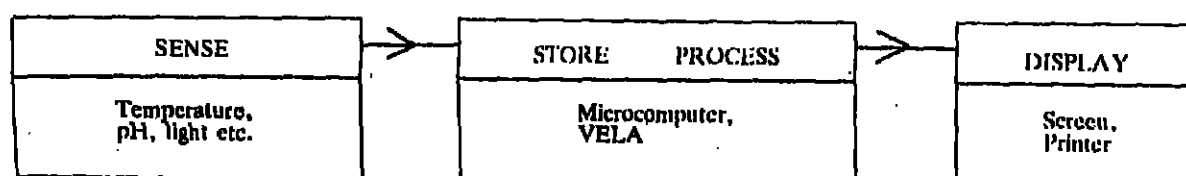


Fig. 1. Principles of electronic monitoring

Is 'Microspecial' so special?

Dream pack?

JEREMY DAYNES

In September 1984 a pack of 25 computer programs was published under the name of "Microspecial". What was "special" about the pack was that it represented the first direct government sponsorship of software for children with special needs. Furthermore, there were strong grounds for believing that such sponsorship would produce educational software of a standard that would act as beacons for programmers and purchasers of software alike for many years to come. The dream, alas, does not seem to have been translated into reality.

In the last few years the Government, mainly through the Department of Trade and Industry, has been concerned to introduce microtechnology into education. Both the secondary and primary school sectors have received considerable financial assistance in the purchase of hardware and the primary schools were provided with supporting software and some teacher-training on the use of the new technology.

As usual, the needs of the special schools were the last to be considered but hopes were high that the lessons learned from the mainstream experience would enable the special school sector to be of superior quality. Informed talk was of a package of hardware and software worth several million pounds to be distributed free to all special schools. Unfortunately the special sector, being last in the pecking order, was the first to be left by the DTI's decision to begin a two-

months. The Pack was launched in September 1984 but to the general astonishment and outrage of the special sector, far from being distributed free to schools catering for the target group, the package was given to commercial publishers who promptly put a price tag of £250 on it. The subsequent future was quelled in November 1984 when the Department of Education and Science announced that they were (with unspecified support from the DTI) meeting the cost of 1,000 free issues of the Microspecial Pack to be distributed on a pro rata basis to local education authorities in the UK.

Last summer eight special schools and units in Wiltshire. The situation is, however, far from ideal. Although some schools or units are now benefiting from the pack, they are only provided on loan and will have to be passed on (together with back-up copies of the programs) to other schools - presumably just when the teachers involved are beginning to discover the best ways of using the programs!

This problem could be remedied by the purchase of a "license" (cost £1,000) - which would allow the L.E.A. to make as many copies of the pack as are needed and these could then be distributed freely within the county. The question is, however: would it be justified in spending such a large sum? Should any school ever

Continued on page 42

and computing in the real world

Wanted: resources

In many subjects GCSE will not mean a radical change in course content. As far as computing is concerned, however, the opportunity has (rightly) been taken to incorporate a major change of emphasis.

This change in the new GCSE syllabuses now being taught in England and Wales involves a very significant reduction in the importance given to programming and a concomitant increase in the study of computers as tools for human activity - applications in other words. There is a welcome move towards information technology and away from the technical ivory castle view of computers as machines in a vacuum. At the same time computers are (at last) spreading across the curriculum, so that programming opportunities will grow in other subject areas if that is what learners and teachers want.

However, there is a major problem. To gain an understanding of the use of computers in the real world requires a better knowledge of that real world than teenagers can be expected to have. How far can a class consider robots in an assembly plant, process control in a petrochemical unit, or computers in stock control when few, if any, of the pupils will know anything of those activities?

Indeed one wonders how many teachers will have even an adequate grasp of all the aspects of the world at work that will need to be explored in a properly covered GCSE computer studies course. Teachers who do have that adequate grasp are likely to find their lessons turning into a monologue of disparate anecdotes culled from their recent reading; the others will rely too heavily on the good, but we all know how poor their penetration of the classroom is nowadays (especially as we aren't allowed to use tapes of

ERIC DEESON

most dedicated staff (in either category) will be able to organize an effective programme of site visits to show their pupils some of the reality of their work.

If school computing under the GCSE regime is not to slip into the dangerous and unproductive styles of chalk and talk and/or textbook-based rote learning it will need heavy resourcing. First, the carefully nurtured stocks of hardware will have to be used more for time-intensive individual work on suitable applications programs and simulations. Second, there must be a significant incorporation of audio-visual support.

As far as the first area is concerned I shall say no more than that it is a need that is as yet nowhere near being filled. The range of suitable software for the BBC micros is adequate only in parts, while Spectrum users will find very little suitable material in many areas.

Schools working with Research Machines computers (including the Nimbus) may appear better served, but their tiny software budgets will be an insuperable barrier to obtaining an adequate library. (The Government's Software Support Scheme will be of some help maybe, but it is possible that it was set up too early for this particular need fully to be appreciated.)

As a teacher who has long attempted to integrate audio-visual materials into my lessons I am currently far more despondent about the lack of support we face in that area. The schools broadcasting organizations are likely to make the most useful effort, but we all know how poor their penetration of the classroom is nowadays (especially as we aren't allowed to use tapes of

valuable evening and Open University material).

If we spurn the use of illicit video recording we must fall back on the purchase of audio-visual material from the traditional sources. In recent months I have been trying to build up a file on this subject; I have met frightening lack of success. Not far off a hundred letters of enquiry have elicited no more than a dozen or so useful responses. We must rely fairly heavily on AV in IT and computing teaching, but we cannot as there is so little to rely on.

Where did that survey I mentioned get me? Only in the case of videotapes is there anything like a reasonable supply, though there are an awful lot of unsuitable programmes around. CFL and EFVA have the most extensive lists of worthwhile material at this level; look at COIC too. It is good to see purchase prices coming down from the recent ridiculous high to below the £20 mark.

Video in the classroom presents the same problems as using 16mm film, with the added drawback of the smaller screen. It is especially hard to select the right extracts and to provide one's own commentary. Only slides can provide a really flexible visual resource bank. Roll on the compact disc and videodisc.

But as for those so essential slides: most slide publishers have apparently decided to produce just a set for computer awareness: not what the market needs at all. Posters: there are a few (thanks mainly to IBM, best suppliers of freebies); audiotapes - very few; ohp transparencies - ditto. So most teachers wanting to use AV will have to turn to DIY. DIY AV may be spot on as regards content, but it's so time-consuming to do properly.



Programme our name to memory

NEW
AMSTRAD
PC 1512 AND
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reflect on it...

CommuniTel

What does the introduction of the BBC Master Compact mean to schools?

The BBC Master Compact is one system which is made available with a choice of three different monitor options.

The basic system consists of the computer, with integral keyboard, connected to a monitor stand which contains a power supply and single three and a half inch disc drive. This is known as the Master Compact Entry System (385).

The monitor options are: a Master Compact TV system - this contains the entry system and a PAL TV adaptor (£399); a Master Compact Mono System - this includes the entry system and a monochrome monitor (£469) and a Master Compact Colour System - this includes the entry system and a medium resolution colour monitor (£599). The prices quoted are Acorn recommended retail prices excluding VAT. No doubt your dealer will better these prices.

At first glance the Compact keyboard layout looks very similar to the Master 128 which is what the system should really be compared with. However, there are a few oddities. First, the @ symbol has been moved to above the zero key and replaced with two small squares which appear to do nothing. They do have a function related to the foreign language character set but this information is well hidden in the manual. Second, many BBC applications programs come with function key strips as indeed does the VIEW wordprocessor supplied, but there is no function key strip holder anywhere to be seen. When testing some of our software in the office I was sitting close to a door. When anyone came in the keystrip just flew to the floor in the breeze. Perhaps every Compact should come with a packet of Blu-tack!

The most noticeable difference is the lack of some of the sockets provided on the Master 128. Underneath the Compact there are no sockets at all: they are all on the back. There is a power socket to take the supply from the monitor stand, an RGB socket, a disc drive socket for connection to the three and a half inch disc drive in the monitor stand, composite video socket, joystick port, and parallel Centronics printer port. On the side is a 50 way expansion bus.

There are also two sockets blanked off labelled RS232 and ECONET. Removal of the cover of the Compact reveals that the sockets are actually there but they both require additional circuitry to make them operate. So ECONET users can add about £40 to the price and to use the system with a

modem you will need to add the RS232 capability (£26).

One of the main problems current users will find with the disc drive socket is that they are different from the Master 128 so that different cables must be used. The disc drive connection is not really a problem since the Compact can only access its own disc drive but the different printer and joystick sockets will create some frustration in those classrooms with only one printer, a Master 128 and a Compact.

The Atari style digital joystick socket is also marked "mouse" but will not take the standard mice around at the moment.

In some of the reviews I have read, the machine is described as being without a user port. This would be a significant omission since many peripherals (Concept keyboard, turtle graphics, etc) use this socket. However, if you hunt for it you will find the user port. Parts of it are on the joystick socket and the rest on the expansion port. A very strange cable indeed is needed to use it. We have made such a cable for test purposes and with it the user port acts exactly as it did before.

The Compact also has four banks of sideways RAM and shadow screen memory as in the 128 together with four internal ROM sockets - one 32k and three 16k. The Master cartridge system is not present on the Compact.

When you switch on and autoboot the Welcome disc you are provided

The Compact connection

ALUN HINDER

with a OEM style front end with pull down windows. This is driven by Acorn's WIMPS (Windows Icons Mouse Pointer System). Moving the pointer over the appropriate box and tapping a key will activate the pull down menu from which you make your selection. Most of the software provided on the Master 128 is repeated on the Compact Welcome disc. The most significant differences are the exclusion of Viewsheet but the inclusion of Logo.

Acorn have obviously recognized the vast lead attained by Logotron in the BBC Logo market and have provided Logotron Logo and not Acorn-soft Logo. This wise decision should be welcomed by the educational world. There is also an excellent Logo starter manual included with the software.

The other options on the Applications window are ABC (Acorn's prize-winning beginners' wordprocessor), desk top (containing card index, calculator, note pad and clock), TimPaint (a graphics painting program), and View (version three - the current top of the range together with printer drivers). The View, and Logo software provided are loaded from the disc into sideways RAM and remain there when you leave the machine.

The other main difference between the Master 128 and the Compact is the provision of the Advanced Disc Filing system and no other. This could have an effect on software houses which have used features of the DFS which

are not present in ADFS. The ADFS has the same tree structure as the ECONET system and a tutor is provided on the Welcome disc.

While the ADFS is certainly more powerful than DFS you must be careful when using it. A simple example: I use the Welcome disc to call in Logo, I remove the Welcome disc, I put in my disc with my procedures on and try to load a procedure. The Compact will generate an error "disc changed". It knows you have changed the disc. The problem is that the ADFS reads the catalogue into memory and expects the disc to remain in the drive until you tell it you have changed the disc using "MOUNT". Not an insuperable problem but one which must be recognized.

Transferring software from five and a quarter inch discs to three and a half inch discs as well as on to ADFS format will be beyond the scope of most educational establishments. As a software house we perform this task by having a five and a quarter inch disc attached to a three and a half inch disc. The ADFS based software is all developed on a Master 128 and copied into three and a half inch when ready, which demonstrates very well the compatibility between the Master 128 and the Compact.

Another way of transferring programs is to send them via the RS232 port (assuming that you have one installed on the Compact). One solution we found before we had the doubled up disc drive was to put the software up on to the ECONET from the Master 128 and to draw it down on to the Compact - although this does seem like software

transfer overkill!

Unlike the Master 128 ADFS, formatting and backup is provided internally and does not have to be loaded from a disc. Having only one disc drive may seem like a problem but many schools have been living with this for some time now. However, the disc capacity is 640k as opposed to the 128 single sided 40-track 100k discs. The disc is also a single entity - it is possible to know about disc surfaces.

Acorn provide a catalogue of software which is readily available for the Compact running under ADFS as well as being on three and a half inch discs. This contains some 300 titles. Some of this software has been around for some time and will be exactly the same to the user as previous versions. What may be done on the Compact is to provide software which takes advantage of the extra memory provided by the sideways RAM. Indeed our own Quest package has been rewritten for the Compact and now includes 80-column screens and 64k internal data space. The ADFS system must also be hidden from the software user so the he/she will not need to have any knowledge of what is going on inside the computer.

One of the places where the Compact will score is when used on ECONET. When running on ECONET, the Compact is about 15% more expensive than the ET but you do get sideways RAM which for serious software users is a big plus.

Should you buy the Master Compact as your next BBC computer or the Master 128? Prospective purchasers must ask themselves the following questions:

● Do I mind having two different types of discs in the same classroom?
● Do I mind having a different printer cable for each type of computer?
● Do I mind having software that will take advantage of the Compact but lack some features on the normal BBC B?
● Do I mind having to get used to ADFS when I have grown used to DFS?

To sum up, Acorn have provided a good system at a low price for Acorn. However, there are many other systems around at a much lower price with more hardware attached. On the other hand there is a rich software environment for the BBC range of computers which is not readily available on other systems.

Alun Hinder works at the History Unit for Computer Based Education, Hatfield, Herts.

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Popular Computing Weekly - July '86

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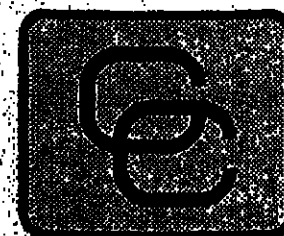
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Dream pack?

consider spending £250 for the pack or would it be more prudent to purchase individual programs at the (very high) cost of £25 a program?

This research considered six programs from the pack, which were concerned with an area almost totally neglected by software manufacturers - social and life skills development. The research took the form of an evaluation exercise undertaken from several different viewpoints, namely - the innate qualities and capabilities of the microcomputer; the special needs of the target group; the aims of the pack's program; the well-made

These criteria were incorporated into two questionnaires - one aimed at teachers and in-school computer experts, the other at the pack's target group - 14-16-year-olds with learning difficulties. Questionnaires were taken into Wiltshire and Oxfordshire special schools, units, remedial classes and FE colleges catering for students with learning problems. Unfortunately, numerically speaking, a balance of views was not obtained as the pupil/student responses (171) were over three times that of their teachers (47). Nevertheless, this constraint was to a certain extent overcome by reducing the statistical results of the surveys to percentages.

For the benefit of the harassed class-teacher, these results were translated into "The Microguide", a quick perusal of which could highlight pupil and teacher opinion on the key issues of achievement, of self-confidence, of involvement, as well as give an indication of the time and reading age needed; the ideal pupil size and the program's suitability for other pupils.

As emerged from the figures, "Survive" was the only program all evaluators were prepared to include in their curriculum - and it was the only one to meet most, but by no means all, of the demands of the researcher's program. The crucial factors were its flexibility and its very thorough recording system which included diagnostic analysis. The other five programs varied greatly in quality, content and style and far from acting as guiding lights for future programming ventures most, if not all, leave a great deal to be desired. Nevertheless, there was a consistently high level of pupil enjoyment (a 76 per cent to 97 per cent rating range) and this should not be dismissed lightly.

Space restrictions unfortunately prevent an in-depth analysis of the results of the research but it was noted that:

● The pupils themselves raised considerable doubts about the efficiency of learning through these programs in comparison with traditional classroom or family input.
● The pupils were generally doubtful about the ability of the program to achieve its aims.
● Every program had its "bugs" (problems or mistakes).
● There was a generally high regard for the documentation which accompanies the programs.

● The worksheets were also regarded as useful appendages to the programs, although many of them have minor faults.
● Most programs required quite a bit of teacher input in order to maximize effective use.

It would be unfair to draw too many conclusions with regard to the quality of the "Microspecial" pack as a whole from the study of less than a quarter of the programs, especially as the pro-

grams under review concern themselves with a subject area, social skills, which is notably difficult to "computerize".

Nevertheless, the variable quality of these six programs suggest that putting software into packages is a ploy that only benefits the publishers and that one should tread very carefully before spending all of this (and next!) year's capitation allowance on the "Microspecial" pack.



EXTRA

Are wordprocessors all they are cracked up to be?

Writing in the Third Person

Probably the most widely accepted applications of the microcomputer are those which involve the use of word-processing packages, and as the computer-child ratio increases in schools, they are becoming a more practicable option for classroom teachers alert to the issue of access. It is to these wordprocessing packages that I would like to shift our critical attention, away from the easier target, drill and practical programs; not because the "driller killers" have ceased to be a cause for concern, but because wordprocessors have not begun to be.

We hear of a variety of claims for the effects of the wordprocessor on children's writing: children get enthusiastic about drafting, they write more, they take a pride in their writing, they collaborate in producing it, they distribute it, and so on. Such claims will not be disputed here: I have seen many of these effects for myself, and know how important such experiences have been for many classroom teachers at a time when their morale is so low. But let us step back a little from such enthusiasm to ask some more difficult questions. While not wishing to discourage those who are beginning to experiment with computers as tools, and in particular with their use as wordprocessors, we need to remind ourselves that we do not need to use wordprocessors: we can write without them. It is so easy to be inspired by observations such as Seymour Papert's that what is good for professional writers is good for children that we can easily forget that plenty of novelists are choosing not to use a wordprocessor. I find myself needing to reassure many teachers that children who do not use them are not going to be "disadvantaged", and if I were back in school as an English teacher and there was a choice between a wordprocessor and 500 paperbacks of my own choosing, I would have no qualms about buying the books. Indeed, it is deeply disturbing that a former colleague of mine, hearing this statement, commented that he would not contemplate teaching English without using a computer.

Why does it take a new tool to create the effects we would like to see in classrooms? What has gone so wrong

in institutional education that we need technological fixes to make it work, to re-awaken the excitement that we have all felt at times, in being teachers? We all know perfectly well that, on a good day, we can (if we want to) achieve some of these effects without props, and that, in an ideal environment, with fewer children in a class, with more time, in the company of like-minded colleagues, with access to plenty of low-tech tools (such as pens, scissors, erasers, paper and books) plus space and, of course, a fair rate of pay - we could achieve all of them. And who says that all these changes are indeed desirable? Isn't institutional education already obsessed with the importance of writing? Using wordprocessors does seem to encourage many children to produce more sustained writing (perhaps simply because it is more convenient to return to it), but, one effect of schooling on many children, for much of the time, is to lead them to regard writing as an alien ritual, and wordprocessors alone will

DANIEL CHANDLER

not change that. Why do children take more pride in their work with a wordprocessor? It is at least partly because it looks like a printed book, and we have always held up the book as a model. But we are surely not trying to train children to be novelists or even journalists, and most of the writing in most of their lives will not be done on a keyboard. Why isn't the existing writing environment sufficiently supportive for children to feel free to scribble things out and to make a mess: why is neatness so important? Could it be that the value of a wordprocessor to some children is that it lets them get writing to an acceptable stage as soon as possible, to get it over and done with?

Many educationists have, of course, pointed to the value of revising texts; learning to shape one's writing to match one's audience and to meet

assumptions for granted regarding our own writing. Children in schools almost never have the chance to decide for themselves what it is all in aid of.

We can defuse all this by saying to ourselves that we will take on board as many of these objectives as is practicable, or that we will do so "as often as possible", but if we want children to love writing and to be liberated by it, we must not lose sight of such aims.

In so far as wordprocessors may simply make writing in schools tolerable for children, they could easily lead us to forget our goals. When enthusiastic teachers show me classrooms in which groups of children huddle around wordprocessors, writing in progressively collaborative style, apparently enjoying the process of drafting, discussing and so on, I know that I am expected to be delighted because such a spectacle without the wordprocessor is rare in schools. It is, and I am. But we must ask ourselves whether we are offering children a

ment and the attitude of the teacher, processors frequently report this pleasure of collaborative writing. I spent four years collaborating with a friend writing a novel, and very enjoyable styles were so eclipsed by this experience that the novel was actually written by what we called "the Third Person". We were often delightedly surprised by the way the Third Person wrote. We do not, however, have many models of successful collaborative writing. Writing by committee tends to be rather inconsequential, whatever the social value of being on the committee. Schools may be in danger of underestimating the importance of individuals writing their own texts. This is not to imply that writing is a solitary activity: most writers need frequent consultations with friends whom they use as sounding boards, and this is what needs to be encouraged in schools.

Hunter Davies commented on the radio recently that the wordprocessor "seemed to have millions of amazing facilities, none of which I wanted". You do things with a wordprocessor because they can be done, regardless of their worth. Many people have reported the tendency to slip into obsessive editing of insignificant details - annoying when you have a deadline to meet, and hardly a tendency we would want to foster in children. Extensive writing with wordprocessors could easily lead to the idea that writing has to be polished. A recent report from NATE to the DES pointed out there was a danger of over-emphasizing revising in general. As the document puts it: "audience, purpose and meaning can be lost in the difficult business of managing the words", and freshness and spontaneity may be lost.

Wordprocessors are obsessively tidy. Their orderliness doesn't suit all of us - at least not all of the time. Sometimes when we write some of us need to make a mess. We need maps of the routes we did not choose as well as the one we did: we might want to go back. My scribbles are more useful to me as maps than successive drafts of a wordprocessor. Writing done with a wordprocessor obscures its own evolution.

One of my neighbours pointed out to me recently that when you write with a wordprocessor you can look at something you have written some time ago and not recognize that you wrote it: you have been tidied away. Word processor distance us from what we have written. We know that many young children have difficulty in standing back from their writing and seeing it as a reader would, and writing with a wordprocessor may help them to do so. But it doesn't always work: one may cease to read one's own word-processed drafts: even I find myself thinking "it looks so neat it must be right by now". It takes someone else to spot the lapses. At this point my wife, who is constantly being asked to play this role of "someone else", pointed out that if it were not for the fact that I drafted in on a wordprocessor she would not have to read over several complete drafts for me. With hand-written amendments she could see what I had changed and just read that - and so could I.

Then there is the issue of the future of handwriting: even if we quickly accept that writing by hand will become rare for the purposes of routine communication, we should surely be alert to its current value in relation to our sense of self. We can express more of our feelings through handwriting than we could do even with any print we might design for ourselves through handwriting style, pressure and crossings out.

Writing with a wordprocessor can also be far from convenient. Sometimes, I confess, it is just too much of an effort for me to switch mine on, find a blank disc, set the text format I want to use, and so on. Think about the difficulties involved in merely inserting your discs. This is often a bitter

Writing in the Third Person

continued

problem for some users than producing the text on the screen. There can't be many writers who, when using word processors, have not lost pages or chapters - I heard recently of one who lost a whole book.

A more subtle feature applies to any computer-based activity. Using a computer tool such as a wordprocessor inevitably formalizes and systematizes whatever you are trying to do. It may sound a strange thing to say about a medium in which editing is so easy, but the medium does require you to be somewhat more deliberate. Even when the machine is already up and running, you must think in terms of its rules, its language and all of the features I have been discussing which amount to inbuilt prejudices about the nature of the writing process. You can become very conscious that you are not just jotting something down but composing a text. In a recent New Zealand study by Margaret McLeod one child reported that using a wordprocessor made the writing look "more important". Even after six years of using a wordprocessor I still feel that using a wordprocessor also makes one more conscious of the process of writing than scribbling on paper does.

We must not let ourselves be convinced that we will be obliged to get used to living with wordprocessors: they must get used to us. Perhaps a few of my objections to various features of wordprocessors may be met by enhancements of the available systems, but my underlying concern is that a system is a system is a system. The problem with computers is that you must know exactly what you want to do with them before you can make them into suitable tools. The problem with writing is that we don't know exactly what we have done even after we've done it. We face that problem with language already, of course. With some of the systems approach will never work. So teachers need to have a McLuhanic determination to become conscious of the features of the medium, and to determine how and when to use it to serve our needs. Or, as a friend ironically put it after reading a draft of this article: "a technique is a technique is a technique".

All have quite different strategies in approaching writing tasks, and the technologies we use underline this. Some people carry their wordprocessors in their heads. Some authors can simply switch on "book mode", directly transcribing their thoughts on to paper: many of these people use typewriters (though some guidelines use their wordprocessors as if they were simply typewriters). I am at the other end of the spectrum as a writer: I think through writing, and for some stages of writing a wordprocessor can be very helpful to me indeed. Typewriters do not suit me at all.

Perhaps taking on board the issues of control and of personal styles is too messy for teachers and schools which prefer to have everything ordered and under control. A major concern is that computers offer such people the perfect tool for making the schooling system neat and tidy, processing out of existence what really matters.

In summary, just as Plato criticized the technology of writing and proceeded to use the technology to do it, I clearly do not reject the wordprocessor as a tool, but I want users to be in control. If we care about children we should hijack the new technology before it is used as an excuse for getting us to renounce our ideas. It is deeply disturbing that microcomputers are spreading in schools at exactly the same time that schools are being transformed, through cutbacks and pressure from government, media and industry into child processors. The applications of any technology inevitably reflect the attitudinal context in which it is used. Even apparently open-minded computer tools will not of themselves lead to any educational advance. A wordprocessor can be a powerful tool, but at present it can also be a very simple safety valve which makes the existing system work.

Since the Macintosh and its disks support artwork-quality printers, "No longer do I have to read every line to check for errors. The flexibility and ease of use of the Macintosh... makes the editing and polishing process enjoyable rather than tedious. It gives me the freedom to write the book as if I was actually teaching". High praise indeed from a man who has spent some 15 years involved in computers.

A paper about books. But Aston is not the only university where the benefits of Apple's Desktop Publishing System have been discovered. Roger Emery, of the Department of Land Management at Reading University, is also a firm convert.

Welsh language database

An Economic Social Research Council questionnaire in 1984 revealed that even in Welsh language schools, computers are generally accessed in English. According to the survey, Welsh was used only 14 per cent of the time in primaries and three per cent of the time in bilingual secondaries.

Melin Gruffudd primary school in Cardiff intends to reverse that trend and ensure that Welsh is accepted as a viable technological language. To this end the school is developing a new Welsh language database to store information researched during school projects. And, as the software has been programmed solely in Welsh,

data is entered and retrieved in that language by the pupils aged 7 to 11. Funded by a £5,100 Welsh Office grant, the database was programmed by teacher Suzanne Smith. "The objective", she said, "was to provide storage space for ongoing projects which can be added to by different groups over a number of years." But the main advantage is that "the material is readily available to the pupils in Welsh - the language in which they compile their projects."

Suzanne has already devised a series of workcards suggesting the type of social, historical and geographical databases which can grow out of a study of "our town". The school, the

community and the local church can provide a wealth of information for keen young researchers. At Melin Gruffudd, the attraction of being able to enter their findings on the computer has made the children even more willing to undertake such research assignments.

The database is programmed for a BBC micro, and the success of the school's pilot study has resulted in the creation of a computer software package which will be marketed at £28 to other Welsh schools next spring. It comprises the programme chip (which must be inserted into the computer by teachers), storage disc, teachers' guides and project suggestions.

IOLA SMITH

A lesson in proof-reading (and how to avoid it) by Doctor Peter Coxhead.

Proof-reading a manuscript is not a pleasant task at the best of times. Imagine how much more tedious it would be, when you have to check through 150 pages of complex computer language.

This was the job facing Dr Peter Coxhead, a lecturer in Computer Science at Aston University. He was preparing an introductory text book on the LISP computer language, used in artificial intelligence programming.

"I was dreading the thought of proof-reading all that code. One parenthesis in the wrong place and (the program) wouldn't have run."

Before he got his Apple[®] personal computer, Dr Coxhead's method of checking his manuscripts was somewhat circuitous. After writing a piece of LISP code, he would test it to ensure it worked. Then it would be cut out and pasted into his manuscript, after which the whole thing would be retyped. Only very careful proof-reading would ensure there would be no errors in the published program.

The cure for LISP. Some computer books overcome this problem by using the author's printouts as artwork. This certainly results in accuracy and just as surely in terrible print quality.

But with the help of his Macintosh[™] and some sophisticated page-design software, Dr Coxhead's book has come out both error-free and professional-looking. Instead of submitting a conventional manuscript to his publisher, all he had to do was hand him a floppy disk containing all the text, graphics and LISP code.

Since the Macintosh and its disks support artwork-quality printers, "No longer do I have to read every line to check for errors. The flexibility and ease of use of the Macintosh... makes the editing and polishing process enjoyable rather than tedious. It gives me the freedom to write the book as if I was actually teaching". High praise indeed from a man who has spent some 15 years involved in computers.

A paper about books. But Aston is not the only university where the benefits of Apple's Desktop Publishing System have been discovered. Roger Emery, of the Department of Land Management at Reading University, is also a firm convert.

In fact, he has used his Macintosh and the LaserWriter to produce a paper on that very subject, entitled "A Revolution in Academic Publishing".

In it, he describes the problems encountered in the publishing of academic books, and how the Desktop Publishing System overcomes them.

He sees the main problems as flowing from the high cost of production. "Some worthwhile books are not being published because they cost too much... and some students are not able to afford to buy all the books they need for their course."

A new era for publishing. However, Mr Emery believes that "the availability of the microcomputer, combined with... the use of the Apple LaserWriter, heralds a new era for academic publishing". Since the text can be typeset as it is being composed on the Macintosh's screen, and then printed out as artwork by the LaserWriter, the financial problems described above no longer occur.

And as Dr Coxhead also discovered, the saving of effort is no less significant. "To all intents and purposes," wrote Mr Emery, "when the writing is finished and checked, so is the... proof-reading."

Mr Emery has further praise for the uses of the Desktop Publishing System, which he describes as

being "infinitely flexible; authors can design their own fonts or invent their own characters for setting on the LaserWriter. (It's) not restricted to typesetting letters and numbers; it can also reproduce drawings, graphs, charts and pictures."

Dr Coxhead agrees. "If I had to pinpoint one thing about the Macintosh that is a major breakthrough, it is the integration of text in different fonts with diagrams, to allow the production of quality work in an easy fashion."

These benefits have many uses outside the Computer Sciences Laboratory. To discover more about them, you could attend the AppleWorld exhibition, where many leading academics will be speaking. The exhibition takes place at the Business Design Centre in London, from October 29 to November 1.

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unitee. Schools may be in of underestimating the importance of individuals writing their own texts. This is not to imply that writing is a solitary activity: most writers need frequent consultations with friends whom they use as sounding boards, and this is what needs to be encouraged in schools. The use of wordprocessors in classrooms, with their tendency to support group efforts, may easily result in an excessive emphasis on writing by committee.

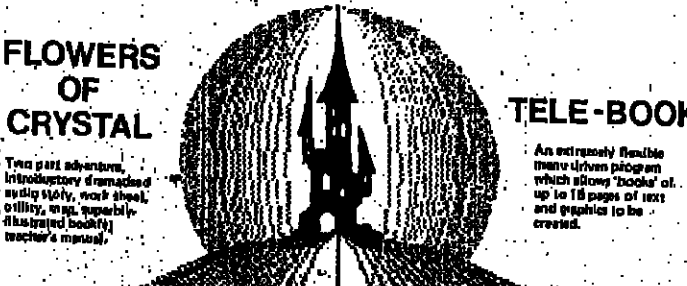


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EXTRA

EXTRA

A project which uses the computer to give pupils freedom to explore their own arithmetical strategies

A screen scratch pad

HUGH VINCENT

Why do so many pupils reject the formal methods of calculating they are taught in schools? Almost in defiance of their school based experience they seem to build up their own idiosyncratic strategies for working things out. Sometimes their strategies are inadequate yet this need not be so. One often hears of people who profess

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Fig 1 Independent line mode

1in is about 25mm ✓
 12in is about 300mm ✓
 1ft is about 30cm ✓
 3ft is about 90cm ✓
 1yd is about .9m ✓
 100yd is about 90m ✓

Fig 2 Proportion mode

100% : 10% : 5% : 15%
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Fig 3 Ratio mode

to being "hopeless at mathematics" and yet are very effective at quick reckoning, or of the proverbial darts player whose skill at keeping score leaves one feeling all thumbs.

It is not just a question of practice, it is more to do with style and the way in which processes are broken down and built up. Even from a very young age, children have the mathematical creativity to develop their own "break down" and "build up" strategies. They have a wealth of numerical inventiveness but the normal school arithmetic curriculum rarely gives them the encouragement or recognition to allow their ideas to grow.

Even so, some children continue to develop their own, often outlandish, idiosyncratic styles which they soon learn to cover up and hide as the gap between their informal world and the official world of formal pencil-and-paper methods rapidly becomes unbridgeable. It is no wonder that some children begin to dislike mathematics when their contribution to its development is so often being stifled.

It is too easy to blame traditional arithmetic teaching for this state of affairs. It has, after all, to operate within certain constraints. If we were to allow each child in a class to develop their own unique methods how would their work be monitored? How could we find the time to follow each child down their exploration of uncharted waters? (Possibly strange to us as well as the child.) The logistics seem unmanageable. Yet it is crucial for children's understanding and involvement that they are given scope to develop their concepts and techniques in their own individualistic way. There seems to be a wide gulf between what is desirable and what is possible.

The answer could lie with computers. Why can't we use computers to give pupils freedom to explore and develop their own arithmetical strategies? The computer won't mind how strange a child's thinking is, as long as it is mathematically correct it could be programmed to recognize it.

But this will need a sort of computer program that allows children to test ideas by "listening" to their thoughts and responding accordingly. One which would provide an environment for children to develop their own ways of doing things depending on their skills and understanding at the time. In a sense the screen must become a "scratch" pad on which children can type their mathematical ideas; a sort of "maths" pad.

This, in essence, is what *Mathspad* has been designed to do. The program allows children to type in an almost limitless variety of mathematical statements which it can then assess. The statements can be about almost any topic in everyday numeracy and can incorporate units, fractions, decimals,

percentages, ratio, proportion and so on (see fig 1).

To give children this freedom it is necessary to control them. There is no paradox: one has only to think of the fence around an adventure playground designed to give children the freedom to explore the playground. In the case of *Mathspad*, the controlling "fence" is an inbuilt syntax analyser that tries to interpret the current line the child is typing as each new key is pressed. If *Mathspad* cannot make sense of a particular keystroke, the cursor briefly changes into a question mark and a "help" message appears.

This gentle control stops the child from typing incorrectly formatted mathematics such as mispelt units, inappropriate use of the decimal point, zero denominators and so on. (It also gives the child the feeling that the computer is constantly alert and listening to what he or she is doing.)

Mathspad also responds to typed input in a rather unusual way. Most programs require children to type their input (commands, answers, responses or whatever) and then press the RETURN or ENTER key. Up until the moment that the RETURN key is pressed they can change their minds, but once they press the RETURN key they are irrevocably committed. Their response is then judged by the computer to be "right" or "wrong" in some sense or other.

Mathspad doesn't work like that. It doesn't wait for the RETURN key to be pressed. Instead, it reassesses the whole of the current line after each new keystroke without waiting for the child to press the RETURN key. It is constantly on the lookout for correct mathematical logic. When it "hears" a correct mathematical statement the cursor changes to a tick. (This can, on the odd occasion, give the startled child a pleasant surprise.)

The pay-off in terms of motivation is high: *Mathspad* never actually marks anything wrong. All that happens when a line is incorrect (or incomplete) is that the cursor remains "normal" allowing the child to either finish the line if incomplete, or if it is not correct, to edit it until it is.

Only when a line ends in a tick can the RETURN key be accepted, but then only to bring the cursor to the start of a new line. In other words, the child cannot start a new line until the current line is correct, so that what is finally left on the screen is a line-by-line record of the child's correct work. There is simply no screen record of incorrect work.

The *Mathspad* concept has been compared to the idea of an "answer checking" calculator: you type in the question or sum but instead of the computer giving you the answer, you give the computer the answer. It then checks to see whether you were right

or not. However, it is unlike a calculator not only because it can accept fractions and so on but, much more significantly, because it allows modes of line-by-line working where each line is related in some way to previous lines (eg "proportion mode", "ratio mode" and "function mode" see fig 2, 3).

We are finding that the ability of *Mathspad* to handle proportion provides a powerful way to help children develop their own build up strategies. In fact, the first classroom based project is aimed at legitimizing and developing adolescents' informal build up strategies, applying them to a wide area of basic numeracy and then using calculators to develop more sophisticated proportional reasoning.

This project has been running for nearly two terms in the computer room at Bullsmoor School in Enfield with about 10 mathematically less able fourth form pupils working at the computers for about an hour a week. This follows earlier informal trials at Aylward and Winchmore secondary schools, also in Enfield.

The core of the project consists of 11 booklets which provide pupils with a variety of mathematical activities which can be monitored by *Mathspad* and which are related in some way to proportional reasoning. They include the reading of graphs, scales, tables, ready reckoners, the direct measurement of length and area and so on. We hope to be able to report on this trial in 1987.

It has been a surprise to discover how many activities can be supported by *Mathspad*. The possibilities are endless. So far we are concentrating on basic numeracy training for adolescents, but we hope to explore more investigative types of work for younger children. Much work still needs to be done in finding ways in which programs like *Mathspad* can be used to enhance children's ability to develop their own ideas.

This is a situation not uncommon in educational computing. As more sophisticated software and hardware becomes available, the real task is devising ways of using this technology to meet the needs of children. The danger is that children's needs become subsumed to the "needs" of the technology. We hope we have avoided this by directing our use of computers to where it really matters, namely helping children to increase their understanding of basic numeracy.

Hugh Vincent is senior lecturer in Mathematics and Computer Education at the School of Education, Middlesex Polytechnic.

Mathspad and the 12 numeracy booklets are due to be published by Longman in January 1987.

Calculating ways

What is the point of an in-service course on calculators in 1986 when all the secondary schools now have micros?

Don't pupils know how to use their calculators anyway?

These seem, on the face of it, to be such reasonable points of view that they are worth looking at more closely. On the first question: although schools may have a number of micros on the premises, even in the best-resourced school we are a long way short of one per child. Micros are only as good as the software they run and in too many cases (Logo and wordprocessing excepted) it is the micros which drive the pupils, rather than vice versa. One per child use of the calculator is now a reality and pupils do feel in the driving seat when using one. For problem-solving and investigative work the calculator has a flexibility and an ease of use that the micro cannot (yet) match. It is also true that pupils quickly learn to use the basic calculator functions without the need for help from their teacher, but the calculator has more to offer learners than its ability to calculate. Used sensibly it can be a powerful learning and teaching aid. It is the sensible use of calculators in the classroom that is the focus of the new Open University pack, *Calculators in the Secondary School* (PM643).

The research and development of the ideas for the pack were supported by a grant from the DES and involved teachers from Hertfordshire, Durham, Leicestershire and Oxfordshire. There were three eventual outcomes as a result of this project: a text for teachers, a tutor pack and a software pack.

The questions raised by the main text, PM643, are as follows: How much do I know about how my own and other calculators work? Chapter 1 looks at the ways in which basic facilities differ from one calculator to another and explores each facility in some depth.

How can I help pupils to use their calculators sensibly? Chapter 2 discusses what might be called "good practice". Can the calculator be used as the basis for new approaches to topics? Chapter 3 explores the potential for using the calculator in the teaching of topics such as ratio, algebra and trigonometry. How might the calculator affect the way in which I teach?

A central theme of Chapter 4 is how the presence of calculators in the classroom can be used to encourage discussion amongst pupils and aid the diagnosis of misconceptions. Should we have a school policy on calculators? The final chapter looks at the broader issues of developing a coherent school policy for calculator use right across the curriculum.

There is also a 30-page appendix of

puzzles, calculator games and work sheets.

The text described above has been written for teachers to read and try out the activities in their classrooms. However such ideas are best used collectively by groups of teachers and so the tutor pack, PM643, offers suggestions for a short in-service course based on the main text. Included in the pack is a video of classroom excerpts.

The software pack, PM643, has been designed to accompany the two packs mentioned above, but in fact the software is self-standing. It allows a BBC micro to double up as a rather outsize calculator for the classroom. The plastic keyboard overlay which comes with the pack transforms the keys of the micro into calculator keys and the machine is transformed into a giant scientific calculator which both displays values and "writes" key sequences on the lower portion of the screen (called the "blackboard"). The software also provides a representation of what happens inside the calculator case when keys are pressed.

For further details of how to order these packs, write to: Centre for Mathematics Education, The Open University, Milton Keynes MK7 6AA.

ALAN GRAHAM

The ACE (Aids to Communication in Education) Centre

Powerful aid

NICK BAKER

The purpose of the ACE (Aids to Communication in Education) Centre is simple. It is to provide expert help to children who have communication difficulties, as a result of physical or mental disability. Its task, though, is quite daunting. In the two years of its existence, it has helped over 300 children to become better communicators. There's now a six-month waiting list for its services. And at the same time as providing day long sessions for individual children, assessing their needs and advising the therapists, parents and teachers who accompany them to the Oxford building, the centre's staff have to keep up with the latest developments in microtechnology.

The computer can be an immensely powerful aid to a child who perhaps has severe problems with co-ordination, or speech, or who has one or more sense permanently impaired. But every child is different, and it is ACE's job to suggest the right permutation of software and hardware to suit the individual's need.

Six-year-old Graham is a good example. He's not an ACE client (he attends the special school next door to the centre) but he's a willing demonstrator of a piece of special software, designed to help children initiate communication. In effect, the suite of programmes can break down what a language impaired child like Graham wants to say into its component parts of letters, words and sentences. Graham types the words he wants to say, copying them (if he wants to) from the example his teacher has already put on the screen. He can then instruct the computer to read the sentence (via a voice synthesizer) first letter by letter, then word by word, then as a sentence.

For good measure, the programme will reinforce all this by printing out the sentence. It is also user-considerate, in that it can be set so that it won't respond to "wrong" copying commands, fostering the child's confidence, and guiding him or her to the point where sentence building becomes second nature. You can see the result with Graham. It encourages him to experiment (he started, unbidden, to list the names of his classmates recently) and it also helps him relate what he reads from the screen with his own impaired speech. And, although the voice synthesizer has the usual sound of a Mid Western Robot with indigestion, the aural element adds even more reinforcement.

Pru Fuller, the Centre's director, stresses that often it's software - rather than a complex hardware set-up - that can be the key to unlocking a child's communication skills. Even so, the centre has an impressive collection of keyboards, screens, specially adapted switches and voice synthesizers. There's even an elementary voice recognition unit.

Assessment of individual children, sent to the centre via their I.E.A. is exhaustively thorough. A whole day is devoted to each "client". The first step, before the child arrives at the centre, is to examine information from his or her teachers, parents and therapists. The child then goes to the centre, with teachers and/or therapist. The centre's "home team" includes an occupational therapist, a speech therapist and a technical consultant. Under the direction of Pru Fuller, who has long experience of special education and communication problems, there can be as many as seven adults involved in the assessment - too many to all be in the room at the same time. Video is used so that the teams can monitor the session as it happens.

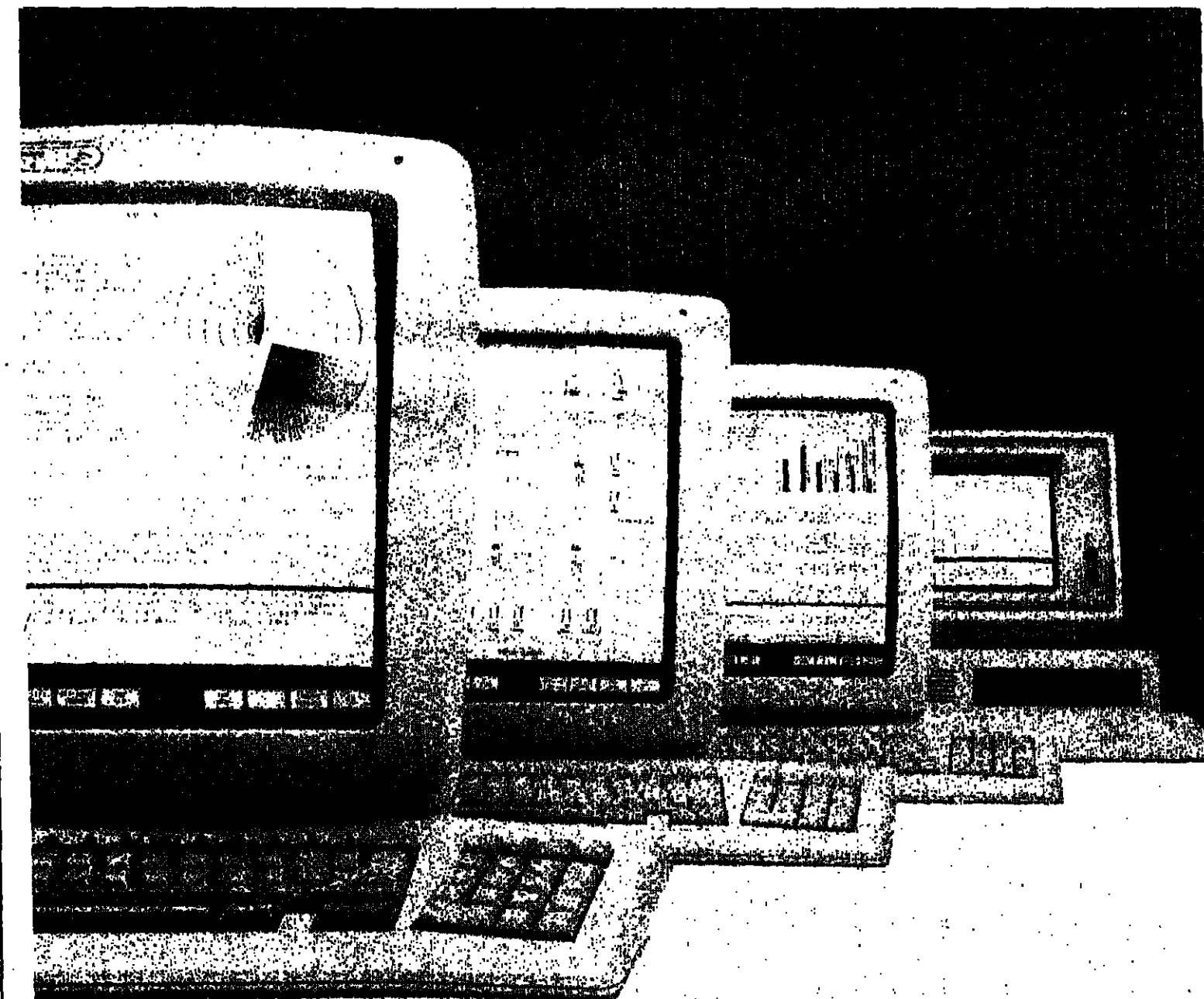
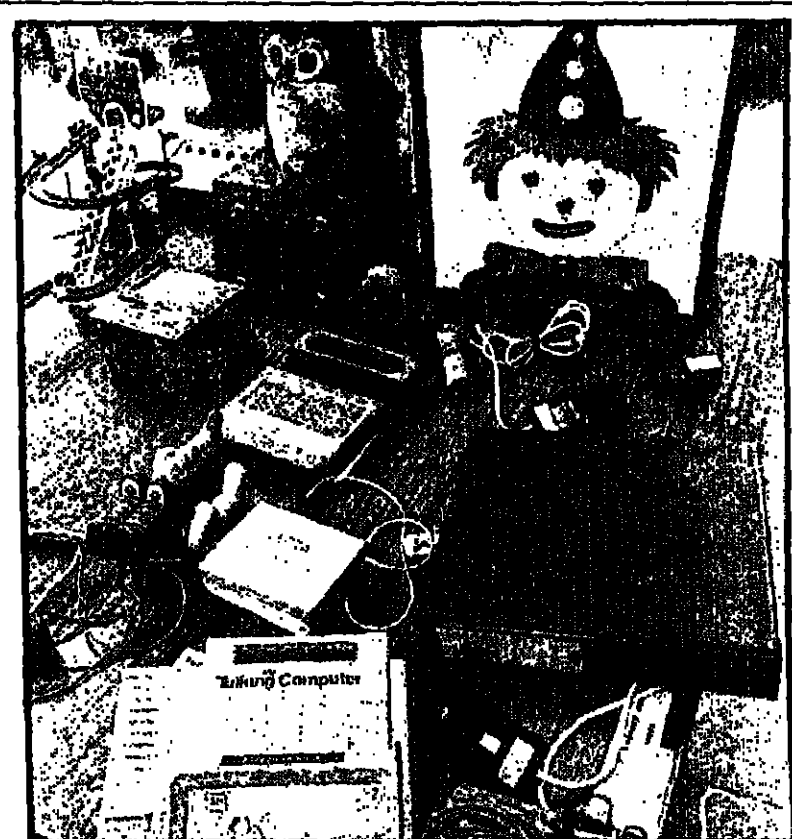
A major help to the child's ability to communicate is often low tech. A communications board, simply printed on card with squares containing words, numbers and symbols, allows a child to string ideas together by pointing to the appropriate squares. The next step is an electronic communications board, complete with voice synthesizer. "Of course, here, the technology lets us down," says Pru Fuller, "because on the whole, still, that is plugged into a wall and no child wants only to communicate when they're plugged into a wall." For the more mentally (but less physically) able, a Microwriter pad,

don't feel helpless any more". The broad range of disciplines of the centre's staff is unique. "It's where education and therapy can meet", says Pru Fuller. "We don't think there should be such a divide."

The centre, and its northern outpost in Oldham, also act as an information service, and the Oxford base runs regular open afternoons and workshops for interested professionals and parents. What they can't do, inevitably, is provide the equipment that they suggest - that's the job of the I.E.A.

One thing becomes clear from a visit to ACE: industry has been slow to serve people who have the most need. The voice synthesizer can be a boon for disabled learners and communicators, but the place you'll most likely encounter one is behind the wheel of an Austin Maestro.

(The ACE Centre is at Ormerod School, Waynflete Road, Headington, Oxford OX3 8DD. Telephone 0865 63508)



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EXTRA

Is there a place for fantasy in the secondary school?



Things aren't what they seem

Who hear on in-service courses that cross-curriculum use of computer software is strictly for the primary schools with the implication that the rigid subject-based secondary curriculum makes the process impossible.

However, during a meeting of our local users' group in Wigan, I was encouraged to look through "the box" and select some software for evaluation. One of the programs was *Dragon World* from 4Mation Educational Resources. This is an adventure game which sets many challenges in logic and problem solving. As its title suggests, the users enter a fantasy world of sorcerers and magic. "Use your eyes; use your ears; use your brain. And use your imagination. Things aren't always what they seem..."

As a piece of commercial software *Dragon World* is quite unusual. As well as the disc and users manual, there is a collection of supplementary materials. This includes a story book, a cassette tape, dragon templates, Concept Keyboard overlays etc.

The most significant resource is the ideas book. This has literally dozens of ideas for work in curriculum areas such as Art, Environment, Science, Maths, and Drama. It presents a picture of a class working both on and off the micro. At times they may be in groups, together as a whole class, or working as individuals.

But you can't do that in secondary school, can you? Consider a first year English teacher. They have an English teacher, a Maths teacher, a Science teacher and... and... and they all have a syllabus and different teaching locations.

Starting with the head, who was enthusiastic, plans were made to involve a first year class containing several less able pupils. Heads of department were approached and the cross-curricular nature of the project was explained.

DAN VICKERS

A meeting was arranged for the normal subject teachers of the class. We looked at the program together, and teachers worked through the game themselves. Besides opening up the possibilities, this enabled us to keep one step ahead of the pupils later on.

Individuals examined how their own curricular areas could be associated with the suggestions in the ideas book. As there is such a wealth of ideas, subject teachers found no great difficulty in choice of activities.

There was some scepticism at first. Curricular boundaries are difficult to break down. However, after a few weeks of planning by subject teachers, enthusiasm began to grow. In one area, Creative Arts, the stimulus was so useful that other first year classes were brought into the scheme. In fact, the *Dragon World* activities replaced some of the previously planned work in music.

The English Department led using the taped story, followed by discussion with the pupils of the story and projected work. To facilitate working with the micro, the class was divided into six mixed ability groups. From this point onwards, two of these groups could be found working at the micro in English lessons.

Form periods were used to enable groups to work for twenty minutes on the micro on a rotational basis. This allowed for extra time to work through the game. As the first week unfolded, the class gradually realized that there seemed to be an inordinate amount of dragons around school whatever they went. It had been decided to let them make the association rather than tell them about it. This did not take long.

They encountered dragons in: maths - probability work, coordinates; science - diet and teeth; art - ceramic work, drawing and painting; music - using the supplementary synthesizer program on the disc; drama - improvisations about dragon slaying; English - an enormous range of work, descriptions, poems, stories for primary schools, news reports, posters, instructions.

All the pupils' individual work went into a special personal folder rather than subject books. This included creative writing, result charts from probability experiments, and work on dict from science lessons. Some pupils' material went on display. There were mobiles, a wall sized collage, annotated newspapers using the *Flow Page* software, and a montage of coordinated work.

The pupils' own dragon stories were typed, placed in folders, and distributed to local primary schools for their use.

The entire project was completed in five weeks culminating in a parent evening when everything was put on display. This final display included both design work and finished models of dragons in ceramics and paper.

Parents were encouraged to try their hand at finding the dragon's teeth in part one of the program. The drama teacher staged a session of improvisations based on the dragon theme.

In terms of both process and product the scheme was successful. There was no indication that the project was linked specifically to the less able.

Next year the school will pursue this modular approach, with third year pupils, using a problem solving program, *Expedition to Saggar*. In answer to the statement that you can't do that kind of thing in a secondary school, I would say: try it! You will probably find that colleagues share your concerns about the appropriateness of activities offered to less able pupils. On that basis, their willingness to discuss particular experiments of a modular nature may come as a surprise to all.

Dan Vickers is head of Special Needs, Rose Bridge, High School, Wigan.

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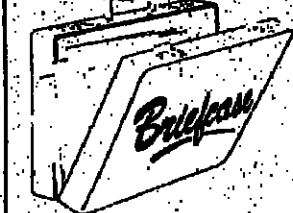
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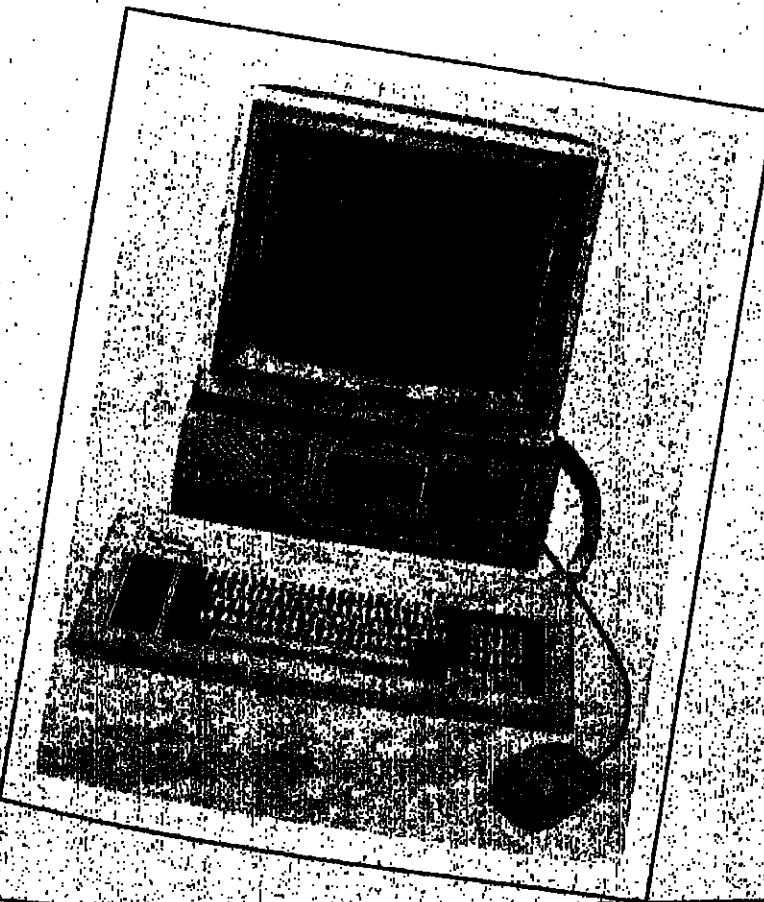
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EXTRA

Profiling in colleges and schools

Speedy record keeping

One of today's most thorny problems in secondary or tertiary education is profiling. Along with GCSE, Certificate of Pre-Vocational Education, Technical and Vocational Education Initiative etc profiling has after years of development in the wings been thrust into centre stage and suddenly become a vogue activity.

At Havant College, Hampshire, experience gained in using the City and Guilds Pre Vocational 365 course profiling system was useful when many of the same staff adopted the CPVE profiling system. The City and Guilds system of "ticking" boxes was simple to use and well-liked but suffered from (and still does) the limited number of descriptors available. The Joint Board CPVE system adopted a much larger bank of descriptors and requires the assigning of appropriate descriptors to each student. Staff at the college found the CPVE system very time-consuming and there was an obvious need to speed up the process.

The problem of time-consuming profiles seemed common and after visits to several courses/conferences a number of staff and a former student combined in their spare time to develop a computer program, for use with a BBC single disc drive, to save time and effort in profiling. The end result was a program that enabled the CPVE staff at the college to profile up to 150 students on one disc at greater

speed and provide each student with a printed update of his/her profile immediately after each profiling session. The use of the program enabled students to develop their own awareness of profiling techniques through a series of exercises developed to be used with students using the disc and computer themselves. The program has been in use regularly in the college since November 1983 and has been adopted by over a dozen other schools and colleges in the area.

From the early experience of computer assisted profiling it became obvious that more general use of the computer would enable other types of profiling to be developed. After extensive study of existing profiling systems the CPVE bank statement system seemed the most attractive (City and Guilds have also adopted a bank statement system with success). A new more general disc system was developed, the CPVE bank statements were renewed and the ability to write in your own hand of descriptors was created. The first use within the college of this system was in creating a new means of recording/assessment in a totally new approach to non-examination studies within the college.

A bank of statements relating to performance in cross curricular skills was developed based upon previous Schools Council work and the requirements of Universities Central Council of Admissions and Polytechnics Cen-

GEOFF MOLYNEUX

The end result was a program that enabled the CPVE staff at the college to profile up to 150 students on one disc at greater speed and to provide each student with a printed update immediately.

with students before they began their Group Activities Time (GAT) work, a whole series of student centred activities such as travel planning, independent living, charity projects, conservation work.

Towards the end of every term staff will negotiate with individual students

the most appropriate sort of descriptors for that term and discuss ways of achieving even more positive descriptors if appropriate. Each descriptor has a coding and these codes are transferred to a student record sheet, from which the codes are transferred on to the disc and a print out obtained of the appropriate set of descriptors. It is possible for 15 students to be inputted into the computer and have 15 profile print-outs within 10 minutes.

The disc system has been further developed within the college to provide the TVEI cohort with profiles. A set of descriptors covering 95 areas of experience has been developed and will be used during the year to provide up to date written profiles for all TVEI students. A similar set of profile descriptors has been developed for the Hampshire Business and Information Studies course and placed on a disc for use within the college.

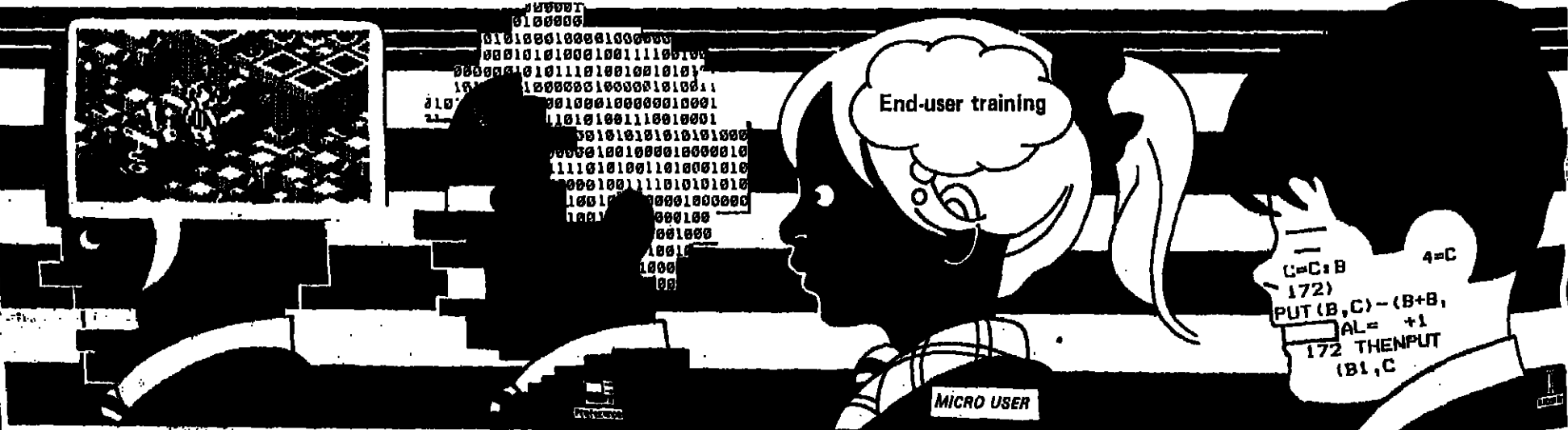
Those familiar with profiling will recognize the summative bias of the work described above. The college recognizes the far more important formative aspect of profiling and the strategies used in developing the system are of vital importance. The original CPVE system places heavy emphasis on this aspect with its program of activities designed to enhance profiling awareness.

The use of profiling within the college will undoubtedly grow and greater use will be made of the other

aspects of the program still under development. It is planned to develop profiles linked to the program in a series of A level subjects, and pilot work has already been done in the area. Currently the program provides space for name, school/college name, tutor group, date of birth, center in which the profile is being used, of handicapped school, TVEI course etc, course content, non course activities, examinations taken/results if appropriate etc.

All of these sections of the program speed record keeping and save immense amounts of paperwork. As the system develops very few staff and students will actually be involved in using the program directly; coding descriptors will enable rapid reproduction of profiles. However, experience has shown that it is possible to be completely conversant with the whole system in less than two hours. Those using the program have had little experience of computers and even teachers responsible for the development of the system know almost nothing about computers. There is little doubt that progress on profiling within the college has been made far easier with the aid of information technology, in this case a computer program plus a BBC single disc drive and a printer.

Geoff Molyneux is Director of Studies at Havant College.



Personal reflections

My interest in Computer Assisted Profiling stems from a belief that we should seek to relieve teachers from all non-academic, non-intellectually challenging, routine administrative work. While the business of assessing a pupil's personal and academic attainments is an entirely worthwhile professional task, the act of compiling the assessed data into an appropriate prose format is nothing more than a tedious, mechanical and time-consuming chore which few teachers relish.

The pupil profile is not an exercise in creative English; its quality is determined exclusively by the objectivity, comprehensiveness, relevance and accuracy of the information it contains, and not in any degree by the linguistic prowess of its compiler. Indeed, the reporting language which we use, though a very precise medium, is inevitably a narrow, and somewhat mechanical, vehicle of expression which rightly limits scope for inferred or implied meanings. It has a relatively small range of vocabulary and its strength is that its use invariably produces a fairly objective, rather stereotyped form of communication; but it is one which allows readers to form their own conclusions.

While creative prose allows its users to travel along an infinity of rivers of thought, each with an endless variety of continuous and discontinuous tributaries of meaning, the profiling lan-

guage confines its users to specific, well-defined pathways and restricts them to their own inevitably constrained objectives. Therefore, while it would be a contradiction in terms to expect a computer to express its conclusions creatively, there is no such contradiction in programming it to express its conclusions in an entirely satisfactory, non-creative linguistic style by the simple concatenation of appropriate words from an extensive database and without resorting to the result of the "fixed, prominent banks" proposed by some authors. Prose produced in this fashion need not be any duller or less readable than normally compiled material providing that the software is of good quality since this is precisely how it is compiled by a human compiler.

When I first proposed this idea in a submission to a college of further education, I was told very bluntly that it was "a complete waste of time". In spite of their negative response, I experimented with the construction of a single sentence from three specific though variable facts and found that only four sentence constructions were possible. Within each construction, every word or phrase could be replaced by a finite number of other words or phrases without changing the meaning in the slightest.

Just as one teacher might describe an almost perfect attendance record as excellent, another might use the words

EDWARD CARRON

first class, above reproach, extremely good etc and after a few days of experimentation, I arrived at a formula which could reproduce every conceivable sentencing possibility for every conceivable variation of the three facts. In practice, this offered some 59 million options to the computer for reporting on how long a particular child had spent in a school and on the quality of his or her attendance record. The computer could, of course, reproduce every sentencing option available to a human compiler instantly, tirelessly and without repeating itself.

After many sleepless nights and much time at the keyboard entering complete sections of the thesaurus, I now have a software suite which is capable of producing original prose descriptions of the individuality of any pupil, both in terms of personality and academic attainment and in less than one minute (including the time it takes to enter the data). Average profiles are between three and five hundred words and each is unique in that if identical data were to be entered ten to the hundredth power, the computer would be much less likely to produce two identical profiles than a single number of human compilers. The quality of prose which it delivers directly to the printer is entirely com-

patible with that normally used by teachers since it is programmed with a teacher's vocabulary and style of phrasing.

Each profile is produced ready for signature and comes with a number of guarantees. It can have neither spelling, typing nor grammatical errors. The information which it imparts is always comprehensive and relevant and it can never contain the negative digressions which were a not infrequent feature of many old-style school reports. It requires no keyboard or computing skills since it employs a form of "spreadsheet" approach and makes no use of the computer keyboard whatsoever; because the programs are well structured, they lend themselves to the inevitable changes which will flow from practical, developmental experience.

Sadly, however, the program suite has one major shortcoming. Although it can reflect very accurately and very succinctly on any pupil's personal and academic individuality, it cannot at the same time reflect the individuality of educational emphasis and approach of every school which ought, of course, to permeate the fabric of each of their profiles. I am very proud of my program suite but I must accept that it will very faithfully reflect only my own policies and attitudes to profiling; it is the product of my own individuality and consequently, is irreversibly constrained by my own idiosyncrasies.

It follows therefore that there will probably never be a universal, general purpose, off-the-shelf computer program which can meet every school's profiling needs and indeed that the very concept of such a program is contradictory as that of a creative computer. I believe that it will be for each educational establishment to create in fine detail its own policy and then to enshrine this policy in software and systems of its own creation and design which will maintain the quality of profiling it desires and at the same time relieve teachers of a completely of the tedious of an eminently non-teaching and non-consuming duty of deciphering and transcribing many hundreds of profiles. There is no doubt that it is a practical possibility; in my view the work should be undertaken as a matter of urgency.

As long as there has been a tutorial environment, pupils have been given files and tutors have always had to rely on some form of technology to record their perceptions. The question therefore is not SHOULD we apply technology in this task - but WHICH technology should we apply?

Edward Carron works at the Observation and Assessment Centre in Wellingdon, Telford, Shropshire.

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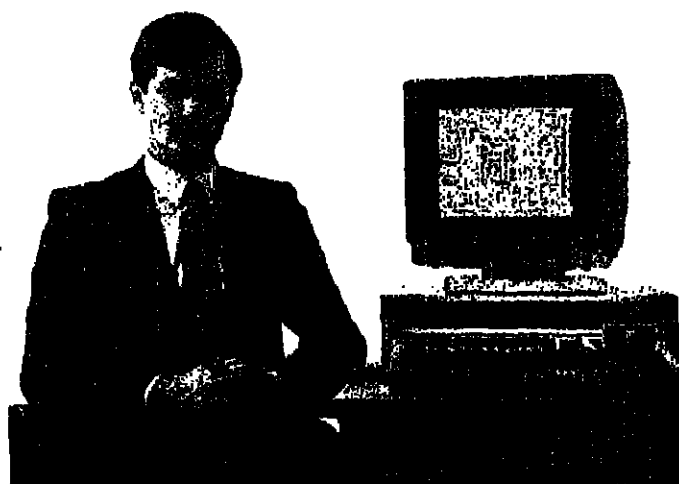
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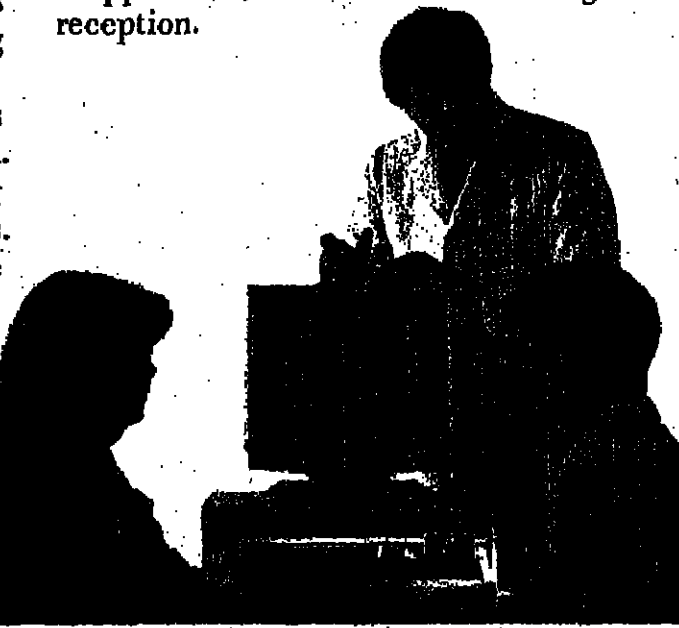
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EXTRA

Databases in the primary school

Much of the software which has poured into schools since the arrival of the computer is criticized by educationists because it is "closed". That means it leads children down a fixed path to a fixed goal. "It" is in charge. Once the group are familiar with the path, the software is of no further use to them. Of much more use is "open" software. Here, the children control the software instead of being controlled by it and it can be used in different ways.

High on any reputable list of useful school software should be a database program, a program which can store large numbers of records and list information for each one under several headings or fieldnames. Once completed, the computer can recall information quickly, compare records, sort alphabetically or numerically etc. Databases are what most people outside education see as the main role of the computer.

Inside the classroom, a database can offer very speedy access to a wealth of information on butterflies, horses, neoplasms, kings and queens of England etc. What used to involve a mind-numbing search through reference books is made relatively easy and information can be presented statistically in a number of different ways including histograms, scattergraphs, averages and pie-charts.

Children can also make and test generalizations. Hypotheses made by one group are eagerly checked by another when they might well have been accepted if the only way of checking was to "look it up in a book". Useful language and social skills are developed as the group discuss together how to phrase the question to interrogate the file successfully. And a real impetus can be given to project work if the information is from the "real world".

Using a database from old census returns of our village, for example, children soon discovered that children of 14 were usually at work, not many people reached 70 years of age and that few people were born more than a few miles away.

But what is often not realized by teachers is the educational value of setting up a database. A database requires information in a very exact and structured form. Take, for example, the setting up of a database on butterflies. Decisions have to be made. What fieldnames will cover everything they need? An entry has to be made for every fieldname so the group will search the library until they find what



Open software

CHRIS WEBSTER

they need. And the "discussion" about whether that one is blue, or red, or purple, is a wonder to behold. A passing educationist might witness the development of social skills, language skills, categorizing, selecting and rejecting, planning and forethought. And almost incidentally, facts about butterflies are brought more sharply into focus.

Having argued strongly then, I hope, for a place in schools for the database program, what is available? There are many on the market and the number is growing rapidly. The three most likely to be found in primary schools at the moment are *Facile* from Cambridge Micro Software, *Quest* from AUCBE and *Grass* from Newman College. Three obvious criteria are: how much will they hold and how fast will they work? how easy they are to use? what they will do?

The answer to the first question owes much to the BBC micro's lack of memory. *Quest* gets round this problem by storing its records on the disc. So the only limit to the size of a file is the space on a disc and over 4,000 records are possible. But searching

those records is slow.

We built a file on the 1891 census returns for our village. Each person was a "record" and the "fieldnames" were surname, forename, occupation, address, age etc (10 in all). 270 people lived in the village at that time.

Quest accommodates them easily enough but when asked, for example, to list all the people aged 14, it takes about two-and-a-half minutes to do it.

Grass, on the other hand, stores all the records in the BBC's "memory". This means it can only accommodate 180 records when using 10 fieldnames. But it can produce an answer to the above question in 15 seconds. *Facile* too stores its records in the BBC's memory but can only accommodate 63 records when using 10 fields.

Second, how easy are they to use? Here, too, *Grass* and *Facile* differ. *Quest*, *Quest* has a language which the children must learn. So, for example, when asking the computer to

match the records with several conditions, such as people younger than five and older than 60, it needs to be asked "Query age L T 5 or age G T 60". It has a vocabulary of expressions such as EQ, NEO, IDENT, NIDENT which may seem puzzling at first, but are soon learnt.

Grass and *Facile*, on the other hand, lead the children into the interrogation by a series of questions, asking the child to select from a menu. *Grass* uses the space bar as a toggle and backs the chosen item in red. Once the chosen item has a red background, the child presses return and the command is acted upon. *Facile* asks the child to type in the letter of the chosen item. Asking the above question is, therefore, more laborious (see fig 1).

I have found that the children are reassured by the guidance of *Grass*. They certainly do not need as much help as they do when operating *Quest*. I find the *Grass* system a bit tedious after a while, however, and I wonder if the children will too, in time.

The third important point of comparison is how "powerful" the databases are, in other words what will they do? *Facile* is the least powerful of the three. It can match its records with several conditions but it cannot sort numerically or alphabetically. It cannot produce information graphically and it won't operate a printer. It is also a bit inflexible as to the kinds of files which can be built. Using it to enter the census records, it asks for the name of the first record to which a child might answer "Fred Smith". It then asks, "What is the surname entry for the Fred Smith?" at which point puzzled children come running for the teacher!

Grass and *Quest* will sort numerically and alphabetically; both will produce information graphically although *Grass* is rather better, giving pie charts, averages and meridians as well as the histograms and scattergraphs of *Quest*. *Grass* will also print these graphics providing one has a suitable printer and this is a very useful facility for project work and for attracting children's enthusiasm. *Quest* does have some extra facilities which we found useful. *Grass* and *Facile* will only find a record if it is spelled correctly. In other words, a name like "Elisabeth" entered carelessly by a child with a misspelt letter will not be found in a search. *Quest* would find all

the names with "Liz" in them and therefore pick out this misspelling. It is generally true that the more powerful the database, the more difficult it is to learn and operate. On the whole I have found *Grass* the most useful in that it has several attractive features the others don't and the children can use it and be independent of the teacher more quickly. The relatively small amount of space was a drawback in our census work but I suspect few projects would require more space than *Grass* can offer.

In conclusion, here are a few additional thoughts: Teachers, if they know about databases at all, tend to think of them as a source of information. In fact educationally, the information itself is the least important factor in thinking and learning. There is a wealth of valuable activity in making databases which has little to do with the information being prepared and which must take place away from the computer. In answer to the obvious question "why bother with a computer at all?" the answer is that being able to "play around" with one's information later encourages great motivation. Making a database often more valuable than using it.

When preparing or using a database, don't let the children lose sight of the original source of information. Otherwise one is back in the trap of "closed" software - the computer becomes the fountain of knowledge rather than a tool to manipulate it.

When making a database, for example, on the census returns, preparation and trial and error will be a format was agreed on a day, but entering records is a tedious task. Employ a volunteer parent if possible!

Although building and using a database are both useful exercises, one cannot perform both functions. A file which is long enough to be useful is tedious to build!

A database can be a useful resource to have when starting a project, but teachers need to have clear ideas where the group might go from there. "Interesting" generalizations offered in a file may need opportunities for discussion.

Databases have a great deal of potential in primary schools. A rich help resource for teachers might be a list of ways in which they might be used other than simply as a source of information. Here are a few less obvious ones to start with:

- A weather survey - each day a record and fieldnames to be temperature, wind speed, wind direction, rainfall etc.
- A class survey of "ourselves" - each child to be a record, fieldnames to be height, weight, speed of running, heart-rate, lung-size etc - are there significant relationships between them?
- A historical survey comparing modern census returns or electoral data with old ones - each person to be a record, fieldnames to be occupation, numbers in family, ages, born etc. Many comparisons are interesting - fashions in names, size of families, average age of population, how far people travel from where they are born etc.
- A survey of habitats around school - records could be numbered squares of ground, fieldnames could be degrees of wetness, degrees of shade, degrees of ground cover, number of earthworms, number of woodlice etc.
- Make a file on one class of children, each child to be a record. Fieldnames to be dad's job, number of brothers and sisters, how you travel to school, what house you live in etc and exchange it with another school.

From a menu: the child chooses	and is then asked
SEARCH DATA	WHICH FIELD?
AGE	WHICH CONDITION
LESS THAN	LESS THAN WHAT?
5	YOU WANT AGE LESS THAN 5 IS THIS CORRECT?
YES	WHAT DO YOU WANT TO DO?
NARROW DOWN SEARCH	WHICH FIELD?
AGE	WHICH CONDITION?
GREATER THAN	GREATER THAN WHAT?
60	YOU WANT AGE GREATER THAN 60 IS THIS CORRECT?
YES	

A national project to investigate the value of databases

Enriched learning

PAULINE BLEACH

Although April this year saw the demise of the Microelectronics in Education Programme (MEP) regional centres, their influence will remain with us for a long time to come.

One of the projects initiated by the MEP, which is soon to be published, is a national database project undertaken by SMIC - the Southern Microelectronics Information Centre at Crawley. During their last year of existence, the project was set up to investigate the potential and value of databases in the classroom.

This was not a theoretical overview but a practically based study which took good classroom practice as its terms of reference. Practitioners were engaged in using various aspects of databases with their classes, undertook to describe their work in a series of classroom reports. The result is a unified package which relates the progression of database applications throughout the whole age range, from infants to adults.

Databases are devices that are used for the storage and retrieval of information in a systematic way. At first sight they may not appear as interesting and appealing as other forms of software but this package shows how they can be employed relevantly to enhance many features of the curriculum. It highlights the kind of activities in which the computer can enrich learning in a way not previously available through traditional classroom methods.

For ease of use, the package has been divided into eight modules and preceded by an introductory guide. The areas covered are - infant projects; creating adventure stories; environmental studies; local history projects; diet and nutrition; on-line systems; mathematics and statistics; wordprocessors.

Although the ideas in all the modules are transferable across subject, interest and age boundaries, each one forms a separate entity so that teachers can begin by exploring the material which has most relevance to their own situation. Each module starts with a brief introductory summary which outlines some of the ways in which children have benefited from using that particular database. There follows one or more case studies related to the topic of the module.

Of particular use to teachers are the series of sample activities which provide the opportunity to re-enact the explorations of the case studies. Two supporting double sided 80-track discs are supplied with the package. These contain datafiles to assist with the "Things to Try" sections. An instruction leaflet is also provided showing how to create separate discs for each module from the two master discs. At the end of all these explorations, further encouragement is given in the form of technical tips on how to use or modify suggested software and materials for use in other classroom activities.

The package assumes some elementary knowledge of the concept of databases but so much supporting information is provided that even a novice would find a great deal of interest in the package. A very readable, excellent overview of the educational perceptions and advantages of using databases is given by Ann Irving, and the project director, Stuart Dexter, takes the reader through the answers to questions such as "What are databases?" and "Why use them?" He also summarizes the different types of databases and describes those used in the modules in greater detail.

Because of the initial expense, this much needed major resource will probably find its way, at first, into Teachers Centres rather than individual schools but it will be well worth the investment.

Pauline Bleach was educational consultant for the educational overview of each of the modules. The National Database Project is shortly to be released and is available from the Southern Software Consortium, CEALU, Slingsbourne College, College Road, Slingsbourne, Kent. Telephone 0795 27836. Price on application (in the order of £50) but will also be available to L.A. advisers of a subsidized rate.

EXTRA

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Music magic

GERALD HAIG

For hundreds of years, composers have dreamed of being able to improvise at a keyboard inside which some magical arrangement of brass, copper wheels and pens dipping into ink would write down their efforts on music paper before their eyes. Non-musicians, I suspect, find it difficult to appreciate the magnitude of the gap between the freedom and pleasure of pounding out chords and flashing runs on the piano on the one hand and on the other the sheer tedium of writing them down for posterity. And the time it takes is only part of the story. You can only write down music if you have first learned a whole grammar of rules and conventions, the beauty and logic of which only become apparent when you thoroughly know them.

What this means in schools, where time is short, motivation is important and the production of good public sound is at a premium, is that musical literacy lags a long way behind creativity. Children compose and play in their own way which is often superb by any musical standard, and yet, by comparison to teach them how to write down their pieces in conventional Western notation seems a daunting and not half so interesting pedagogic challenge.

It was the computer's potential for closing the gap between notation and performance which first attracted me and caused me some months ago to seek support from our L.A. in buying for the middle school of which I am head, a Yamaha CX3M Music computer.

The full set up as we have it consists

of the computer itself, two software cartridges - *Music Composer* and *FM Voice Program* - which came free as part of the package, a music keyboard (with full size keys. There is a cheaper "mini" keyboard, but this is to be avoided), a colour monitor and a 15 watt amplifier and a separate speaker both of which we already had in school.

When you get a new computer - or any piece of expensive equipment for that matter - the important thing is to get it quickly into use in however limited a way. I started by gathering a group of children, all of whom had a little musical keyboard experience. At first they just played on the Yamaha keyboard - without software it is a very good electronic keyboard with some fascinating preset sounds.

I then plugged in the *Music Composer* cartridge and introduced its capabilities. What *Music Composer* gives you on the screen is a blank staff with treble and bass clefs. You can preset a key signature and a time signature, switch to the music keyboard and off you go. There are limitations of course, fulfilment of the ancient dream is still not entirely complete - not for this sort of money anyway. Entry of notes, for example, is not "real time", so you have to select note values from a menu rather than by the length of time you actually hold the keys down. The machine will, however, space your music out into bars according to time signature. And having done a first part you can go back to the blank staff and put in a second - and a third. In fact you can write eight parts.

The obvious thing to do for my

children was to give them some clearly defined tasks which would enable them to compose good music easily and quickly. I thus devised some worksheets which showed three composition parameters for writing three part pieces. First there were tune shapes - where part one was going up in pitch, then perhaps part two should be going down. Second was rhythm. I laid out a series of basic rhythmic patterns from which the children were to choose in such a way that the rhythms in each part were in contrast - if two minims in part one, then four crotchets in part two and so on. The fourth parameter was the setting down of a pentatonic scale from which notes were to be chosen.

Once children had composed their pieces on the screen with the music keyboard, the final - and for them most rewarding - creative step was to assign voices. The Yamaha Music Computer has a wonderful selection of digital voices, ranging from conventional orchestral sounds to special effects such as "sweet" and "rain-drops". You can assign these voices freely throughout a composition, with a different voice to each part, and changing voices within a part as the piece develops.

I cannot emphasise too strongly the importance of this facility, which is in my experience the key motivator in keeping children interested in their work on the computer and enabling them to write music which soon became interesting and at times truly exciting.

continued overleaf

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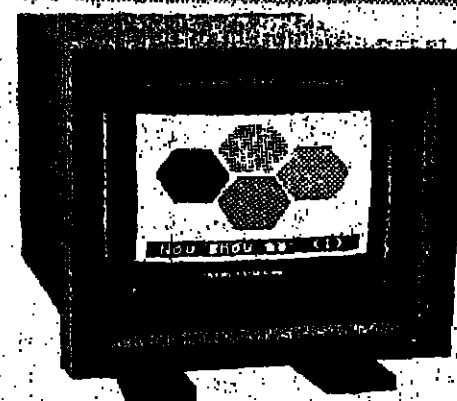
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Control technology in the primary school

Bulbs, buzzers and sensors

Over the last 12 years Rotherham primary schools have developed a strong and coherent policy in allowing as much children's work as possible to stem from first hand experiences. As the primary survey said "There is hardly any aspect of the curriculum in which children can make progress without careful notice of what they see, hear or otherwise experience."

At its simplest level our work is centred on carefully drawn sketches or writing of what children have seen, but this grows to encompass other areas of the curriculum; perhaps more scientific observations or work with maps and reference books. Our view of the curriculum has always been open to challenge but never more so than with the advent of new technology. A child working at a microcomputer using a simulated exploration of a castle or at a series of exercises in CDT aimed at building cubes seems to cut across everything we believed in and had worked for; yet both these new aspects of the primary curriculum have something, possibly a great deal, to offer children. Certainly our children would be growing up in a world where microtechnology was going to play an important role.

Our task then was to find ways in which we could integrate these developments into our existing curriculum. In addition we wanted the children to use the microcomputer as a real tool to enhance their work just as they might use a ruler to measure accurately or a fine paintbrush to work at detailed observation. In this way we hoped children might experience the power of microtechnology and the ways in which it is being used to affect the world around them from the kitchen to Outer Space.

With the microcomputer we began to identify uses which matched our criteria. We have subsequently promoted and supported only a small number of programs. Perhaps the most successful has been wordprocessing. Most of our schools have printers and, within the constraints of the availability of computers, children regularly record their experiences in groups around the micro. They also use Logo, teletext creators, and databases to record and sort their findings.

The new technique of joining wooden sticks by PVA glue and card also allowed us to expand a hitherto underdeveloped part of the curriculum. Building carefully measured wooden structures has allowed junior

STEVE HARDWICK

children to construct 3D models comparable in quality and detail with their 2D pictures and sketches. The models are also strong and light enough to contain moving parts; axles, motors and gears.

After a visit to a watermill our children could now not only draw and describe the building and machinery but with a small range of tools and techniques they could build an accurate working model. The children have used manufactured parts only where necessary, for instance if home made wooden gears or pulleys were inadequate for the task then they have incorporated Lego gears and axles into the model.

As the work developed to include models with motors and lights then control technology provided an obvious link between the two curriculum areas we were developing. Children could program the microcomputer to switch on and off the electrical devices that were being incorporated in models. We have been careful to match the use of control to the level of technology that the children are studying; believing, for example, that an electronically controlled drawbridge was inappropriate to a study of the Middle Ages.

Our interest in control coincided with the production of the first control interfaces that would link with the BBC computer and at the same time be suitable for use by primary children. We also had a small number of schools using Sinclair Spectrums and the Microelectronics in Education Programme in Doncaster produced a control box for these. Although the BBC box came with its own software, AUCBE at Hatfield provided us with a control version of Logo for the Spectrum. We have subsequently begun to adopt the control extensions of Logo for the BBC since this links with our general policy for microcomputer usage.

With centrally provided equipment, and support from MEP and BST, a small number of schools began to work with control. This necessitated teachers arranging visits that would allow children, in addition to the normal range of opportunities, time to observe machinery that they could subsequently model and control. Teachers had to learn alongside the children as the work progressed. The quality and care necessary demanded that the projects lasted over two terms,

most of the time being spent on building the models; control is almost the last stage.

Bulbs, buzzers and sensors have been built into later models with internal wiring to connector blocks. Initial work with older juniors included railway lines with controlled trains and level crossings, models of cranes following a visit to Hull docks and pit headgear as part of work on coal mining. In all these topics the controlled models were only a small, if impressive, part of work that included topic folders, sketches, paintings, fabric work, clay, and other models.

Our beginnings with control had been successful but the next task was to extend the work to more schools. With this in mind we have to date run two four day in-service courses for twelve teachers working in pairs. Both courses began with visits to local factories; one making bricks and the second glass bottles. This was a deliberate imitation of what we hoped to encourage in schools since we wanted to provide teachers with more than just a set of techniques to teach to children. We hoped the course members would be able to begin and then extend their own work rather than, as so often happens, copy what was done on the course and then wonder what to do next.

In building models of the machinery they had seen the course members met and tried to solve many problems without having these artificially created as an exercise.

One recurring problem, mirrored in school, was to gear down, with cog or pulleys a small high speed motor. In spite of the range of experience brought to the courses there were a number of excellent working models produced of, for instance, conveyor belt systems, hoppers or fork lift trucks that were controlled with both sensors and output devices. Where equipment has been available these teachers have been able to work in a similar way in school and the results have included models of the earth moving equipment observed working on a local by-pass, a lighthouse and lifeboat station following a residential visit to the Northumberland coast, and a variety of opening bridges seen on a canal visit.

There can be few activities in the primary school that provide more learning opportunities than building controlled models. The sequence "observe, design, make, test, evaluate" will occur naturally allowing children practical results for logical



thoughts. Children, by the scale of the work, will be in groups trying to solve problems as they arise. A model bridge that actually opens and closes with warning lights and buzzers is a much more powerful motivator than a tick in a book. Skills and concepts are taught when they are appropriate to the task in hand thereby avoiding the danger of a series of exercises that the children see as irrelevant.

Children learn how to saw or join pieces of wood when they are trying to construct something worthwhile. Similarly, the properties of structures or electric circuits can be of real interest to the child if they help to strengthen the model or make the lights work. The most common input sensor used has not been the pressure pad or light sensor but making a connection across two wires.

In spite of all these advantages work with control technology has been slow to spread; perhaps because of the cost of equipment at a time of scarce resources and also because it requires

teachers who are willing to explore areas outside the security of their experience. Much recent pressure has been to split the primary curriculum into discrete subject areas. We tried to make control a small part of a broader approach where much learning may appear incidental rather than deliberately planned in lessons. Work with control is not therefore something that occurs daily within our schools but an activity that takes place during an intensive period at a particular stage of testing and experiments will have taken place as necessary throughout the project. Over the last two years we have held exhibitions including work from all the schools involved and this has encouraged interest from other schools, both primary and secondary, and we hope demonstrated our view of the place of control technology within the primary school.

Steve Hardwick works at Parkside Teachers' Centre, Rotherham.

Music magic continued

A major purpose of this work - perhaps the overriding aim - was to help children to listen critically to what they had composed and to make changes. Screen editing of composed parts is easy on the Yamaha. What is not so easy is getting children to make use of it. They start off very ready to accept whatever they have done, eager to proceed to the finished product. Group discussion and judicious teacher intervention is the way through this, and if children become more ready to listen and criticize and modify, then this alone justifies what is being done.

The children "saved" their work in two ways. First they copied parts from the screen on to music paper. As the composer only shows one part at a time, this is a valuable exercise, with much incidental learning. Then they downloaded their composition on to cassette, and each child built up a small library of pieces. You can get a printer for this computer, but it is expensive and the results are not, in my experience, all that good. One day, perhaps, someone will solve the problem of linking up the kind of printers we have in schools.

Finally, let me underline one or two points. First, the Yamaha Music Computer can be used in many ways in

school, as lots of teachers have pointed out - please resist the temptation to write - please resist the temptation to write - and tell me what they are! I have not, however, allowed this knowledge to prevent me from using it in a simple and yet rewarding project. I feel we really need to keep our feet on the ground in all our electronic computer work, or else we risk spending our time wringing our hands at the complexity of it all while the machine lies idle! Second, that I did buy my machine on special offer at a price which was difficult to ignore. It has since been replaced by a better offer, a version which is not on special offer, and the decision is correspondingly more difficult to make. And third, that the really beautiful thing about the Yamaha is the quality of its voices together with the capability of assigning them freely among composed parts. Anyone buying a computer composing system really needs to hear this very much in mind.



On-line databases

Electronic prospectus

GRAHAM SMITH

This article looks at the use educational establishments can make of on-line databases, and specifically how they can look toward developing their own databases. To illustrate the possibilities I want to describe the Electronic Prospectus, a project currently in progress which aims to make available to students in schools an easily used, constantly updated source of college courses, special events, open days etc.

There is nothing particularly new about combining on-line databases, such as Prestel and the Times Network System (TNS), with Viewdata software, a form of software that allows the user to create their own Prestel-type pages. The best known examples are Micro Viewdata, Edifax and Communitel. Communitel being one of the more versatile of these programs, in that it offers a sophisticated method of producing Viewdata frames, and also offers a well developed graphics package, as well as a useful branching method.

The large range of such systems now available to the individual school, company or other interested user equipped with a modem is very impressive. A Modem is a Modulator Demodulator which enables computers to communicate with each other via direct links such as telephone lines. Many organizations either for commercial or other reasons have established on-line Databases.

It is, for example, possible to gain direct access into Birmingham's collection of census data, or Owllet the BBC's publications information source, or even information on preventive medicines from Healthdata. All you need besides a modem is a British Telecom jack plug to make the link between the mainframe computer and your own microcomputer which is acting as a computer terminal. You might also need a well developed facility in what other people are doing, and a fairly reasonable constitution of systems may also be necessary to pay an annual membership fee such as that charged by Prestel and TNS.

The current charges being made by TNS (as of Summer '86) are an initial fee of £152 for modem and software, plus a subscription of £187 which is paid annually, making the total initial fee £339. With Prestel it is also possible to incur additional charges dependent upon the facilities the user decides to make use of. This means that some of the Prestel facilities incur no charge other than their on-line costs, whereas others, such as the detailed weather forecasting facility, and information on insurance premiums, do result in an additional charge.

However, in the main charges and fees are at a relatively low level and the main factor to be aware of is the bill at the end of the quarter for telephone calls.

These too, however, can be kept to a minimum by first using the system in off-peak telephone charge times, and by "downloading" data onto your own disc for off-line viewing. What this means in simple English is that you find the information you want and then "download" it. Download being the jargon for copying the information from the mainframe data base onto your own disc.

In some instances it may be necessary to use a wordprocessing package to give the downloaded information a useable structure. Having downloaded the information from the mainframe database onto your own disc you then have complete free access to your selected data. Having downloaded the information on to disc the user can then view the data as they would any other item of software, or print out a hard copy.

The net result of such systems is that a phenomenal amount of information and data is now, be it at the fingertips of educational institutions, "TNS is a growing force within schools" and the impact of TNS has been such that all secondary schools and FE colleges have equipped themselves with links into the system. This is, of course, not representative of the country as a whole, but the areas have not been at this direction of the

One of the major functions of TNS is to provide Mailbox users with precisely what the name "Mailbox" suggests, and that is a method of electronic letter writing, report writing and memo sending; no more constant telephoning when the line is permanently engaged. One of the very great advantages of electronic mail is that you can actually know that your message has arrived. You can even demand an acknowledgment of its arrival.

When it was decided to embark on the project of providing an Electronic Prospectus the project was essentially three options. First, we could create our own on-line system such as the BBC has with Owllet. Second, we could use the Mailbox on TNS and allow schools to access the information through that box, and third, we could use ECCTIS (Education Credit Transfer Information Service) but using TNS as a gateway into ECCTIS.

The drawback of the first method, our own on-line data base, is that it is necessary for the prospective user of such information to be aware of the telephone number that the BBC has linked this service to. Although it is quite likely that there is a Directory of On-Line Data Bases I have yet to find it. In many ways this is also one of the problems of Prestel; it offers such an enormous amount of information that the user can be overwhelmed.

Another problem with creating your own linked database is that it is likely to be a popular service then a number of telephone lines will need to be made available for the incoming calls.

The second option putting the data base on TNS and attempting to establish it as one of the first menu options, would mean that anyone logging onto the system would almost automatically be made aware of the existence of your information. Whether this could be established as a first menu option would very much depend on the importance the system manager for your local area database gave to the information you sought to make available. Most databases operate in one of two modes, or a combination of the two.

The first option is to search for data by using "Key Words". ECCTIS uses this method, the person wanting information on a particular course of study enters the subject they wish to pursue, along with details such as level, and they receive a list of suitable institutions. However, in the short term at least the connection into ECCTIS via TNS is not yet available. It is feasible that by the time this article has been published the technical problems in making the link up will have been overcome.

Prestel on other hand operates using menus. What this means is that users select an option from a number of alternatives on offer, by this method they work towards the information they require.

The advantages of using TNS as the home for your data are primarily accessibility, and the fact that it is available now. By using a well established system you give a far wider range of users access to your data without them having to know special telephone numbers.

If on the other hand you do wish to restrict access, then it is possible to build in additional passwords. The other advantage of TNS is that telephone charges will only be made at local rate regardless of the location of the database you are accessing.

One of the many useful aspects of on-line databases is that as learning activity they can very easily cross curricular boundaries, offering skills in communication studies, office skills and careers education. Undoubtedly a range of initiatives are underway throughout the country. However it is intended to concentrate on the Electronic Prospectus, being developed as a joint project between the Hampshire Colleges Information Technology Project and the Fareham Tertiary College, Hampshire.

The aim of the project is to place information related to college courses on TNS. It is intended that the information will be available in a far

more user friendly form than on paper systems, and will give the user access to information that is constantly being updated by the college. Unless information of this nature is constantly updated then its credibility with users will be extremely low. While people are prepared to accept that paper systems rapidly become dated they will not exercise the same tolerance with computerized systems.

The project has established a number of objectives. It is intended that an electronic, or on-line prospectus, should give interested students easier access to course information. The database of information is therefore being designed to meet two main requirements. First, the needs of the prospective student who has already identified the course they wish to follow, ie A Levels in maths, physics and electronics, and secondly the prospective student who wishes to browse the range of options.

The crux of the system therefore is the continued overview



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A course which introduces mentally handicapped people to computing and electronics

New skills

IOLA SMITH

Of all mentally handicapped youngsters 90 per cent are unemployed but they are not unemployable. The dream of obtaining a real job can become a reality. Teaching such youngsters the skills to enable them to earn their own living is the objective of a pilot workshop under way in Cardiff, which introduces computing and basic electronics to 10 mentally handicapped students. The first course of its kind in Wales, it is the outcome of collaboration between South Glamorgan social services, a further education college, and the EEC.

Three holiday workshops were initially held to verify whether mentally handicapped youngsters were able to make use of computers. Then, when it was realized that, with additional training, the pupils could become sufficiently skilled to obtain work in the electronics industry, the year long course was initiated.

It is hoped that by next summer the students will be able to control numerous computing operations, such as mail shooting, accessing records, keeping stock inventories and making simple hardware repairs. Some should even be able to cope with basic programming.

In the first few weeks of the scheme, the mentally handicapped youngsters are becoming familiar with micros: BBCs, Anstrands and IBMs. In addition to learning about computers, they are learning how to use the machines which are being used as teaching aids by the course staff. Barry Frost, developer of the course, said that teachers had found that "computers have the advantage of reducing tasks down to manageable units in a way that would not inhibit the students. Additionally, they allow indefinite repetition of difficult concepts until they are fully understood."

The course has a staff student ratio of 3:1, allowing ample scope for individual tuition when required. This will be even more important next year when the course will expand to accommodate students who are also profoundly physically disabled; specialist equipment will have to be

prepared and already the computer laboratory has devices to enlarge keyboards. There are also touch sensitive screens and monitors for those who find keyboard skills difficult. The hope is also that collaboration with high technology companies and university engineering departments will result in the creation of new products which could subsequently be marketed to other profoundly handicapped young people wishing to learn about new technology.

Located at Rumney Further Education College because of that Institute's tradition of welcoming disabled students, the course is grant aided to the tune of £130,000 by South Glamorgan County Council and the EEC Social Fund. Fifty per cent of the time is spent learning computing, with the rest developing social skills in order to cope in the working environment. "The intention is to teach independence and foster confidence by achieving a series of goals that are to be within the library, getting to college on public transport and making friends with the college's other non-handicapped students," explained Barry Frost.

In a year's time it is hoped that some of this year's intake will be in employment. Others, however, will require further vocational training. To ease the transition between college and work, it is hoped that month-long work experience placements will be offered, the co-operation from employers is essential if this is to succeed.

Getting that agreement could prove difficult. Barry Frost says: "While it is accepted that mentally handicapped people's productivity is not as great as that of non-handicapped individuals,

they can be paid according to their productivity level with the rest of their wage made up by the MSC and the local authority.

"Research evidence points out that mentally handicapped people have many strengths such as a low absenteeism rate, a willingness to stay on a job longer than non-handicapped colleagues, and the ability to enjoy the challenge of working."

During the first year the number of

students on the course will increase to 20 and applications are invited from every mentally handicapped youngster in South Glamorgan. Selection is by interview (the panel includes a mentally handicapped youngster).

More information is available from Barry Frost at South Glamorgan Social Services, Grey Friars Road, Cardiff, on 0222 490022.



Electronic prospectus continued

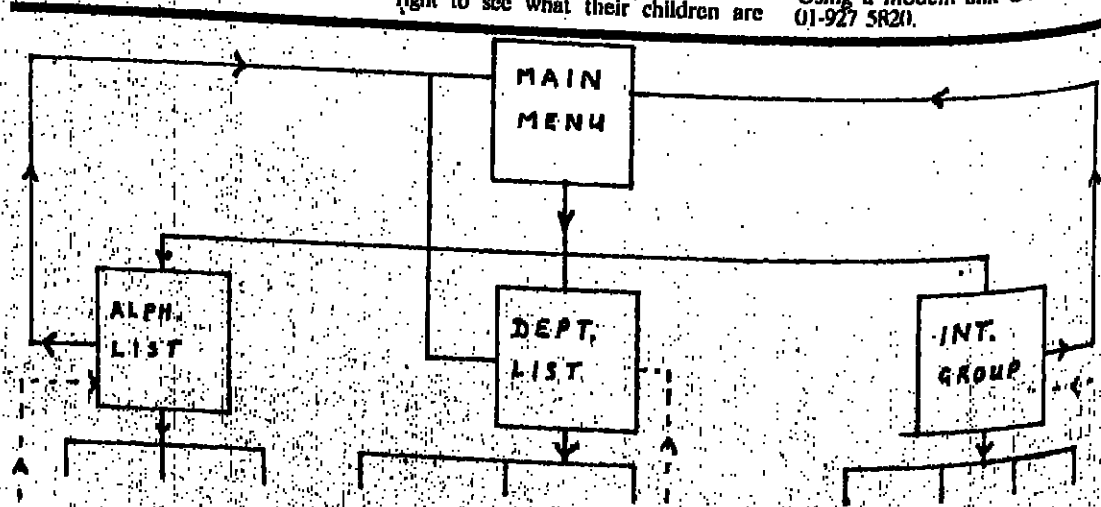
follow, ie A Levels in maths, physics and electronics, and second the prospective student who wishes to browse the range of options.

The crux of the system therefore is the Menu design. This can be more fully understood by referring to the illustration below, but essentially what this means is that the user of the system is presented with a number of options:

MAIN MENU
1 Alphabetical List of Courses
2 Courses by Department
3 Courses by Interest Group

This is a mock menu and should be viewed only in terms of structure.

The diagram below gives a simple introduction on how the menu then directs the structure of branching. With experience it is possible to create a key area search, which basically means that you can narrow an alphabetical list down to certain areas, rather than having to progress through the total list.



The depth to which such a system can be developed is within certain broad parameters up to the individual creating the database. The main factor to bear in mind is that the greater the depth of the database the more complex the routing will become, especially in terms of finding your client with the means to move from one part of the system to another.

Obviously such systems create a great deal of work, one of the first questions to ask, therefore, is whether what you are creating on computer is better than what is available on paper. The Electronic Prospectus it is felt will have considerable advantage over paper systems.

The main advantage is that it can be constantly up to date. Whenever a course closes or a new course is introduced, that information can be readily made available without the usual problems of cost and unread information sheets. The advantage of having an updated page on an Electronic Prospectus is that you can present it in such a way that students are likely to take notice of it.

It must be emphasized, however, that such a system cannot replace ordinary paper prospectus. Parents still have a right to see what their children are

intending to do with their education. However, hopefully the children will have a far more pragmatic approach to their continued education if a formatted part of a full guidance programme.

Useful addresses
Communitel Ltd
189 Preston Road
London W10 6TH
Tel. 01-960 7998

ECCTIS
PO Box 88
Walton Hall
Milton Keynes MK7 6DB
Tel. 0533 708441

PRESTEL
Telephone House
Temple Avenue
London EC4Y 0HL

The Times Network System
PO Box 7
200 Gray's Inn Road
London WC1X 8EZ
Tel. 01-833 7104

Using a modem link OWTEL 8 on 01-927 5820.

Drop down & pull down

What's on the menu for wordprocessors?

JACQUETTA MEGARRY

Inter-Word ROM for BBC Micro and Master 40 + VAT
Computer Concepts, Gaddesden Place, Hemel Hempstead HP2 6EX.
Pen-Friend ROM for Wordwise Plus users
£14.95 inc VAT
Word Processing, PO Box 67, Wolverhampton, West Midlands.

Drop-down menus were popularized by Apple on its Macintosh systems and have become de rigueur on trendy software ever since. While word processing, they allow you to overlap a menu window, showing what settings prevail without losing sight of your text. Moreover, they allow you to cycle through other permitted values without having to consult a handbook, compute in hex or look up an ASCII table. With cursor selection, fingers can stay comfortably on the keyboard. Unlike the much-hyped mouse, no extra hardware is needed, no extra desktop and no periodic mouse-cleaning. Inter-Word is the latest word processor from Computer Concepts. It is quite different in style from Wordwise Plus, which in some ways supersedes it.

Drop-down menus replace embedded commands and are conveniently controlled by simple but consistent use of highlighting and cursor keys. Unlike Wordwise, Inter-Word continuously displays the final format. Unlike many other wordprocessors, reformatting is automatic and virtually instantaneous. Indeed, in 80-character mode, Inter-Word offers a close approach to WYSIWYG, the ugly acronym for What You See is What You Get, an ideal that few wordprocessors achieve, though many claim. Using a standard television-shaped monitor, 80-column mode and standard-width paper, Inter-Word comes as close as software on an eight-bit micro could or should.

Text is visibly centred, indented, ranged left or right, justified, underlined, emboldened or tabulated in edit mode. Printer control is superb — a drop-down menu shows Epson default values, but over-riding them is made very easy by the system's ability to accept codes in a wide variety of forms, automatically translating where appropriate.

Printing multiple copies and selecting certain pages are simple, using a printer set-up menu. Switching underlining is sophisticated, with none of the problems of spurious underlining before centred headings or in margins that dogged Wordwise print-outs. The control codes menu makes it easy to send pre-print and post-print sequences. The former can summon the printer's best-quality typeface, while the latter can flush the buffer, thus preventing odd fragments of aborted print-out from spoiling the next attempt. Printer codes can be saved and loaded either independently or as part of the document.

Page-breaks, top and bottom space, headings and footings, all appear in edit mode when paged mode is set. Personally, I prefer to postpone concern about format until I've finished editing, and it's easy to switch off paging meantime. Although preview varying the spacing of documents and column formatting, up to five columns can be arranged on a page, with Inter-Word taking care of all the consequences for layout, printer effects, headings and footings.

The control of tabs and indents is quite outstanding. The simple but brilliant device of letting you define a "RETURN margin" independently of the left margin simplifies indents and outdents dramatically. Any Wordwise fan who uses indented layouts extensively may become an Inter-Word convert on the strength of this alone. Another tempting feature is the ease of deciding one's preferences for keyboard repeat rate, colour scheme and screen mode (40, 53, 80 or 100 characters to the line). Such preferences are automatically saved with the

document, so they never need to be re-entered. Thus different users can employ individualized set-ups for different documents. I found that a drastically speeded-up cursor transformed editing.

Saving and loading involves minimal typing of file names, as the disc is automatically catalogued and file names are cursor-selectable or matched from the first few characters. Up to 16 documents can be stored and edited as separate Inter-Word packages, though users without shadow RAM (Random Access Memory) will soon run out of memory. This hardly matters since the multi-file option allows continuous processing of documents too large to co-exist in memory. If one of the "documents" is an address list, you can achieve a creditable mail merge without leaving Inter-Word, although serious users will want the compatible Inter-Base package.

Inter-Word represents a godsend to people who need to transfer text between wordprocessor files as well as to electronic mail users. It can spool text to disc with or without printer codes, and it has loaded all the wordprocessor files that I've tried so far without difficulty, benignly turning unrecognized characters into harmless spaces. Loading Inter-Word files into Wordwise is equally painless. You just delete a block of garbage at the top.

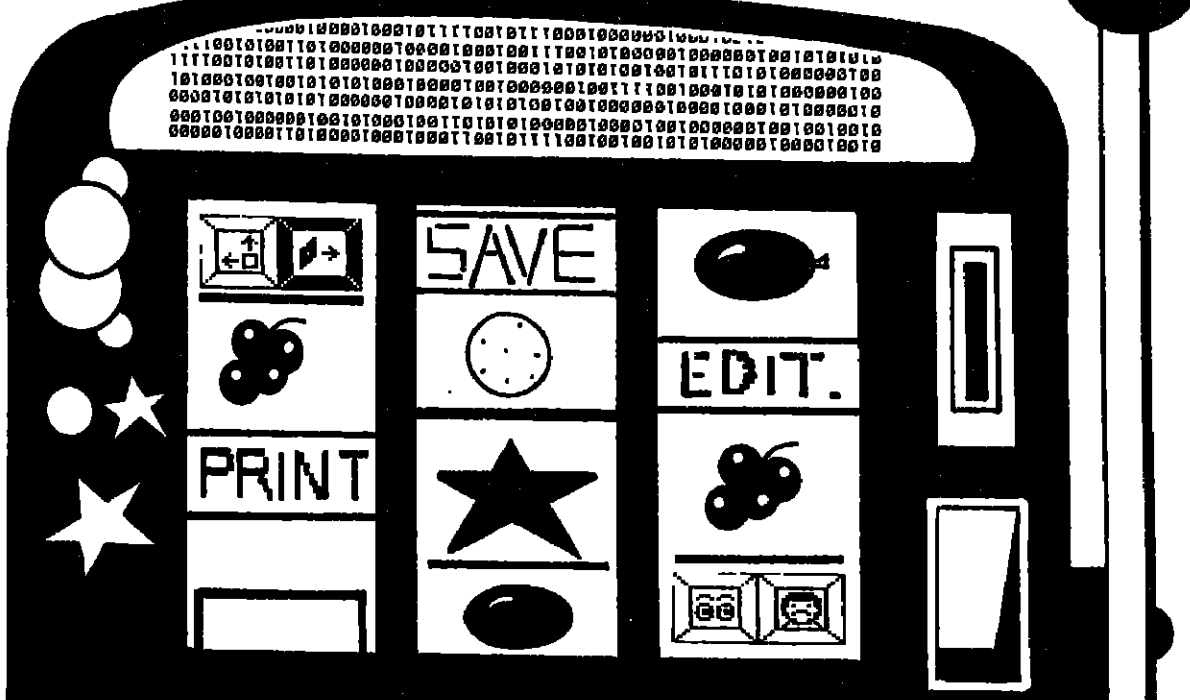
So schools that can afford both systems will find that they co-exist peacefully. There is no need even to reserve separate discs for each type of file. Anyone who has struggled to load View files into Wordwise may treasure Inter-Word for its compatibility alone.

Computer Concepts offer a 20 per cent discount to registered Wordwise Plus users, and this may encourage people to maintain both systems. Cursor control, word delete, marker re-use and case change are identical, and most extra features extend rather than redefine Wordwise commands, so there's little need to unlearn Wordwise habits. Even the Main Menu looks reassuringly familiar: seven of its eight options are common with Wordwise. However, search-and-replace is now controlled by its own menu, giving better control and visibility.

Naturally, there were a few regrets. I missed Overwrite mode and Wordwise shortcuts for deleting to a character. I couldn't always predict which menu to consult, and the prompt card merely reproduces menus rather than indexing functions. Mysteriously, headings and footings are on the embedded command menu, and they were cumbersome to define and impossible to edit directly. I would have preferred a separate heading/footer menu with editing facilities, perhaps at the expense of the marked text menu.

More seriously, Inter-Word is weak at switching between single and double-spaced print-out without giving inappropriate page numbering. You can redefine page length and other settings for double spacing and store them as a dummy document, but then you need lots of tedious changes to revert to single spacing. This drawback may be greater for a professional writer than for teachers, however.

Nevertheless, for those who want straightforward wordprocessing, Inter-Word is almost definitive and certainly miles ahead of the competition. But it isn't programmable, and those who have already discovered the extra potential offered by programmability may remain loyal to Wordwise Plus. If so, they should consider investing in Pen-Friend, the latest and friendliest of the many Wordwise Plus utilities. Pen-Friend is squarely aimed at the user, not the programmer. It employs pull-down menus extensively — for example a window that overlaps Edit Mode shows where you are in which page of a document. You can inspect and edit the page format very easily, without having to remember or look up the embedded commands. You can also inspect all files in the current directory and load with a single key-press. Other routines help with printer control, page formatting, function key definitions, dual-column formatting and label printing. The routines are well chosen and work fast. Pen-Friend is a splendid companion for the regular Wordwise Plus user.



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D. Clarke, Department of Civil Engineering, Southampton University
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TES 10-86

Good teaching ideas for computer-assisted learning software are still hard to come by, but you'd have thought by now that its production would have become streamlined. Surely, after five years of the Microelectronics Education Programme, the least that could now be expected of any package would be that it was robust enough to withstand accidental misuse by its intended users; that it would be free of spelling errors; and that its technical content would be sound. But examining a collection of packages recently submitted for review, the range was still from the sublime to the not very well put together.

Strawberry Fair Educational Software, for example, are according to their publicity handout, a new company specializing in educational software. The initial stimulus for their material was, they say, the Cockerill report and its suggestion that there should be a greater emphasis on the skills of estimation within the schools (sic) curriculum. Have they learnt the lessons of more than five years, hard graft by others? No!

Each of their three programs - *Golfer*, *Machine*, and *Scales* - is easy to crash. While *Machine* deliberately typed in incorrect or invalid values, or typed too much or too little (for example, I just pressed the RETURN key when a number was requested) pupils and teachers could do this accidentally. And even now, in 1986, there are screen displays with incorrect punctuation.

On the content side, *Golfer*, their angle estimation program - actually a bit of thinly-disguised drill and practice - gives the user an angle to estimate in which one of the two straight lines used to define the angle was broken into segments due to the display resolution. Since the point of intersection of the two defining lines was not clear, pupils were effectively being asked to estimate the "angle".

Were you successful in this estimation to an acceptable degree, a little on-screen golfer would hit his ball into a hole.

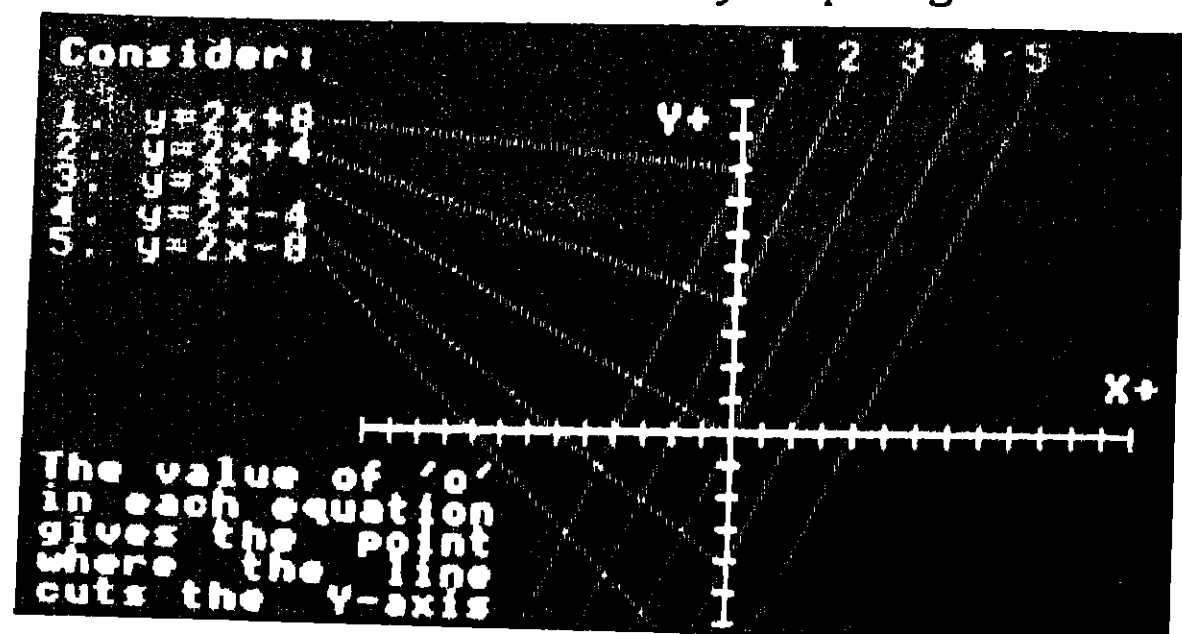
Scales is another, what I would call drill and practice program, concerned with the estimation of length. According to the half A4 side of documentation: "The program... tries to supplement the user's (sic) probable lack of previous experience by providing on screen help in the form of a ready scaled line while the user tries to estimate the length of the unmarked line. By this means it is hoped that the actual process of estimation will be improved and that this improvement will be carried over into other situations."

The scale appears on one part of the screen and the line of which the length has to be estimated appears on another; so perception has quite an important role to play in this one.

Gwent-based AVP Computing are also specialists in educational software and again I looked at three of their months programs.

Transformations: "allows you to investigate combinations of single transformations. Each transformation is animated and can be replayed as many times as you wish. The complete

From the sublime to the not very well put together



Maths angle

Golfer, *Machine*, *Scales*. Price £8.80 each. Strawberry Fair Educational Software, 15 Walker Road, Portsmouth PO2 8PO. *Transformations* £17 (network £34); *Trigonometry* £15 (network £30); *Powergraph* £17 (network £34). All on disc or cassette for the BBC B or Master series. AVP Computing, Hocker Hill House, Chestnut, Gwent NP6 5ER. *Keyfacts Revision Software: Mathematics*. Two cassettes for BBC B/Electron/Spectrum 48K, £11.50 each; disc for BBC B and Master series £14.95 incl Letts & Co. Diary House, Borough Road, London SE1 1DW. *Pie Charts*. Computers in the Curriculum. Disc for BBC/RML 380, 480Z/Apple, £17.50 + VAT; network versions for CM20 2JE. Longman Micro Software, Longman Group UK, Longman House, Burnt Mill, Harlow, Essex CM20 2JE. *Maths 3*; *Maths 4*. ITMA and Shell Centre collaboration. Discs for the BBC/Electron/RML 380, 480Z, £12 each. Shell Centre for Mathematical Education, The University, Nottingham NG7 2RD.

MIKE THORNE

sequence of up to 5 consecutive transformations can be recapped. The figure to be transformed can either be the stored figure (a triangle) or else a single figure (up to 7 instructions) can be entered.

This program happily accepts inputs which are beyond the range it can cope with but, a marked improvement on Strawberry Software, it at least doesn't throw you back into BASIC as a result. For example, it is possible to define a triangle which, when reflected, lies entirely off the screen. One is then left wondering what has happened.

Trigonometry O-Level was similarly unsuccessful. It has sections on Pythagoras's theorem (in which hypotenuse is incorrectly spelt, and O and A are used to stand for the sides respectively Opposite and Adjacent to an angle in a right-angled triangle in which, regrettably, the angle hasn't been specified); sine, cosine and tangents (you follow them); the sine rule; the cosine rule; three-dimensional trigonometry; and a collection for exam-type questions and solutions.

Unlike these two, the final offering from AVP was quite a useful program. *Powergraph* plots a graph on the display screen based on up to 50 points supplied by the user. According to the user's specification, a graph will be

drawn from these points. The options are: straight line segments linking the points; a straight line of best fit; a polynomial curve of best fit; or a cubic spline. It was fairly easy to crash the latter part of the program but the others are more robust. There is a screen dump facility if you have an Epson printer.

Much more imaginative and encouraging of exploration among young mathematicians is *Polytechnix*, a program published in 1984 by the Athenstone Project. With it, you can draw regular polygons on the screen quickly and accurately; choose the colour, size and number of sides to be used; set the manner in which the polygons are to be drawn - just the polygon, just its diagonals, or with all its vertices joined to each of the other vertices etc; and superimpose several similar but different-sized images one on top of the other. You can then get a print-out of your design if you have an Epson printer. For me, this program emphasizes two major aspects of what mathematics is all about - experimentation and beauty.

Dates of books for children drop off dramatically after the age of 12 and then recover because of the enormous

market for revision texts. Consequently, several publishers have their sights set on a possible related market for software. Let's, for example, offer one single revision scheme for mathematics at O, GCE, CSE and GCSE level. Spread over two BBC discs, it consists of 10 programs covering many of the core topics.

The first program, *Calculator*, is fairly typical of the style. It begins by revising percentage calculations. You are shown a flowchart describing how to do it, the program works through an example and then the numerical answers for each stage are shown in the display of a picture calculator drawn on the screen. From my own experience of coaching dozens of O-level failures, I doubt whether this would help anyone revise effectively.

Being copyrighted by The Schools Council with permission via Chelsea College, *Pie Charts* from Longman Micro Software could be expected to be much more sound in its educational design. By and large this turned out to be the case, though the screen can be fairly spattered with confusing equations like:

$$6 / 11 \times 360 = 196.4$$

Meaningless without a convention on arithmetic precedence. The accompanying documentation is an order of magnitude better than any of the programs mentioned earlier in this review and includes six (copied) pupil worksheets.

As its name implies, the program draws a labelled pie chart from data supplied by the user. There is also a Demo feature to enable you to find out how the program works. The worksheet exercises are built into the program but it is fairly easy to run your own.

When I reviewed the first two secondary maths packages from that other important source of software, ITMA (Investigations of Teachers with Microcomputers as an Aid to Shell Centre collaboration), I was excited and impressed by the originality and care with which those programs had been produced. Except in one case, their recent packages - *Maths 3* and *Maths 4* live up to the high standards already created.

Maths 3 emphasizes spirals, where *Maths 4* focuses on co-ordinates. *Maths 3* is a program for exploring patterns in natural numbers using simple rules - a brilliant idea. In the first step the cells of a square grid are numbered, starting in the centre and spiralling out. Different patterns are produced by colouring all the even numbers, or all the multiples of 3, or the multiples of 4, and so on. The idea is to find the relationship between the numbers used and the pattern produced. The next stage then extends the investigation by using different types of grid and other sets of numbers such as the squares and primes.

Two other programs in *Maths 3* concern spirals. In *Dogs*, a number of dogs stand at the corners of a field at the same time each begins to run directly towards the dog on its left, moving at constant speed and turning to follow one another as they go. *Spiral* makes available some of the mathematics you can learn with Logo without the necessary attendant programming.

The program I didn't like in *Maths 4*, which is a Cartesian co-ordinate drill and practice exercise, I've nothing against the drill and practice style *per se*, but the idea of associating any part of mathematics with time pressure is regrettable. Hasn't anyone read Laurie R. King's book *Do You Panic About Maths*?

Finally, *Kingdom of Helior* from Loughborough Primary Micro Project. Described by its authors as a mathematical adventure game, the package contains three copies of a pupil's book, a teacher's book, a pupils' copy of a map and a record sheet for the pupils, and some master sheets for copying more.

A certain amount of the game is content-free in that, in their search for the lost treasures of Helior, pupils will be required to undertake "tasks" from time to time. Some of these tasks are contained as exercises in the pupil's booklet but the teacher can easily insert new ones into the program.

State of the art stuff this. Indeed, one is led to ask why the smaller software houses - which are often run by teachers or ex-teachers - didn't take the trouble to look at it and learn from it. Do we have to keep feeding the sceptics?

Language games for revision

Faites vos jeux!

TIM PARKE

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AVP Computing, Hocker Hill House, Chestnut, Gwent NP6 5ER.
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Chalksoft Ltd, PO Box 49, Spalding, Lincs PE11 1NZ.
French Revision for 16-plus, O level and CSE
BBC B cassette, 40-track or 80-track diskettes
Four grades: £34.95 (cassette), £39.95 diskettes
Dean Associates, Provincial House, Solihull, St. Sheffield S1 4BA.
Screentest for First Certificate
Robert Malmsted and John Walley
BBC B 80-track disc and User's Manual
£35 + VAT
Longman ELT Software, Longman Group UK, Longman House, Burnt Mill, Harlow, Essex CM20 2JE.

volume is adjustable) and the game goes on... there is no provision for progression to a higher level of activity on the basis of success.

If it all sounds rather boring, it isn't, in small doses. The games may be a little childish for 16-year-olds, but they do provide solid revision, albeit mechanical, in a light-hearted context. A little less mechanical is the *Fill-in* section, which enables a teacher to type in material based on the items revised, so keeping a check on the revision process. Each programme is accompanied by a clear and comprehensive guide through each sequence, and a full vocabulary.

Centre Ville is similarly grounded in matching correct words to a stimulus from the screen. This time the contexts are direction-giving (one of those hapless French nationals has got lost in his home town again), colours, and the time, from which one assumes that first or second-year audience is the target.

In the title program, the student has to direct M. Chou to specific destinations; in *Couleurs*, which up to five can play, it's a question of matching colour words to a stimulus.

Each program has a double format: a game, and a Filewriter. The games consist of very straightforward stimulus and response activities - the student is presented with an on-screen verb, for example, and a personal pronoun, and has to type in the correct answer. As an alternative, in some programs there is a multiple-choice option.

In all cases, the student can choose to see an example before playing. Correct answers elicit a high tone (the



Henri Beret series of software provides consolidation of basic grammar. It is aimed primarily at exam revision at 16-plus, though the conceptual level seems to me rather below this age-range.

Each program has a double format: a game, and a Filewriter. The games consist of very straightforward stimulus and response activities - the student is presented with an on-screen verb, for example, and a personal pronoun, and has to type in the correct answer. As an alternative, in some programs there is a multiple-choice option.

In all cases, the student can choose to see an example before playing. Correct answers elicit a high tone (the

Computer-aided

ERIC DEESON

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Programmed by GSN Educational Software

Two packs on disc or cassette for the BBC Micro, Spectrum 48K or RML 480Z; Pack 3 for BBC only
Packs 1 and 2 £13.25 each; Pack 3 £18.95
From Mercury Music Ltd, PO Box 194, Borough Green, Seven Oaks, Kent TN15 8DT.

Practical Computer Studies
Disc for BBC Micro, £24.95
Cassell Publishers, Schools Division, 1 St Anne Road, Eastbourne, East Sussex BN21 1BR.
Keyfacts Revision Software:
Computer Studies
Two cassettes for BBC B/Electron or Spectrum 48K, £11.50 incl; disc for BBC Model B or Master series £14.95
Letts & Co., Diary House, Borough Road, London SE1 1DW.

The most exciting packs here are undoubtedly the three Granada ones.

The Letts *Revision* package of 480-track BBC floppy discs, providing a good number of hours' work on the Master, the audio menu offers history of computing systems, hardware, operating systems, data orga-

nization, flow charts, high and low level languages, logic and number systems. This is all based on traditional courses, but the software is good and fun to use and will have plenty of applications in schools and colleges.

The *Practical Computer Studies* software is to accompany a secondary school course by Peter Avis that first appeared about three years ago. It's a great pity that these programs followed so slowly - had they appeared with the book, the courses might have become highly popular. The software has much potential outside the course and is worth looking at.

There are 10 programs here, from a pleasant transparently programmed game to a little wordprocessor and from various useful simulations to a simple computer-aided design system. The accompanying booklet is well written - and copyright-free - and the package has sure potential throughout IT and computing.

The Granada packages are to accompany a schools' TV series. They include a mass of simulations that are a must for all who try to show computers in the real world.

"Design a house" comes on two discs, with a detailed booklet (it needs to be: this is complex stuff), a keypad and wodge of copyright-free plans and data sheets. A large number of exercises are possible, either based on a set house plan or allowing the house to be located somewhere in Britain. All works (furnishing, wiring, heating and such) must be carried out within budget, and the software can keep track of up to 30 groups at once.

The other two packs offer several

ours displayed to adjectives, which are then applied to animals, showing the cases of agreement. The best feature is that the student has the chance to scan the items that will be needed before the game.

Most fun is the third program, *Notre Dame*: "Quasimodo is dropping houlders from the top of Notre Dame. You must race him to the top by correctly translating the time on the clockface into French". The only trouble is that suspense depends on mistakes. Slow learners (or saboteurs) get more kicks.

I tried three times with *French Revision*, on two different machines, and each time the program refused to load fully from cassette. The initial command sequence had to be re-entered at the end of each section. This makes it unworkable without supervision. Once loaded, one is presented with an abstruse grammatical menu - for example, "the pronoun, relative, nominative and accusative". The programs are tedious with simply no let-up from humourless gap-filling exercises.

Conceptually, the English Language Teaching field looks very ahead: *Screentest for First Certificate* is a very slick production indeed. It is aimed particularly at the Reading Comprehension and Use of English papers, and is designed to enable students to assess their own readiness to take the exam. It includes five types of test - Space-Filling, Sentence Transformation, Word Formation, Sentence Completion and Dialogue Building.

The sequences (at least on my demonstration disc) are interesting, the tone well judged, and, perhaps best of all, *altered* correct answers are offered throughout. The students find out their scores measured against a passmark for that section.

The Teacher Section enables a teacher to review the tests (and print selectively, if desired), review the scores particular students have achieved by section (these records are automatically updated), and see the mean scores groups of students attain. This elegant system is going to eliminate a great deal of laborious transcription and calculation.

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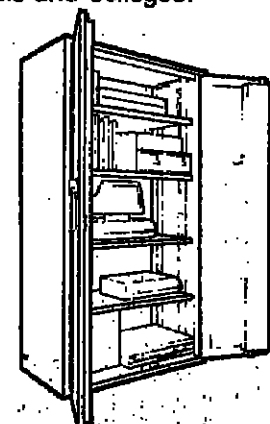
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JENNY MARKHAM

TVEI Wordwise Training Pack
Discs for the BBC and Master series, £28; course plus Wordwise £54; course plus Wordwise Plus £66
Jordanihill College, 76 Southbrac Drive, Glasgow G13 1PP.

This comprehensive training pack has been produced by Jacquetta Megarry and Eric Deeson of Jordanihill College to teach people who have never used wordprocessing to use Wordwise. It consists of a companion booklet, a flip pack instruction booklet (called an "Easel"), a pack of 60 reference cards, exercises, a card and a disc containing designed and is produced on stiff paper of students. Disc housekeeping, disc filing methods, taking back-up tapes and many more examples of good practice are integrated within the

package, and attention is drawn to standard health and safety procedures. The package would be ideal material for dedicated students. It enables them to proceed at their own pace and, indeed, to start at their own level. It covers the use of the pre-1986 Wordwise, 1986 Wordwise and Wordwise Plus with the BBC Model B, BBC Plus or BBC Master 128 computers. This could be very confusing for someone not fairly familiar with a computer. But assuming that the students sort out which system they are following, the course proceeds from basics such as switching on the equipment, through entering text, saving a document, loading a text file, basic editing, etc to using wordprocessing facilities.

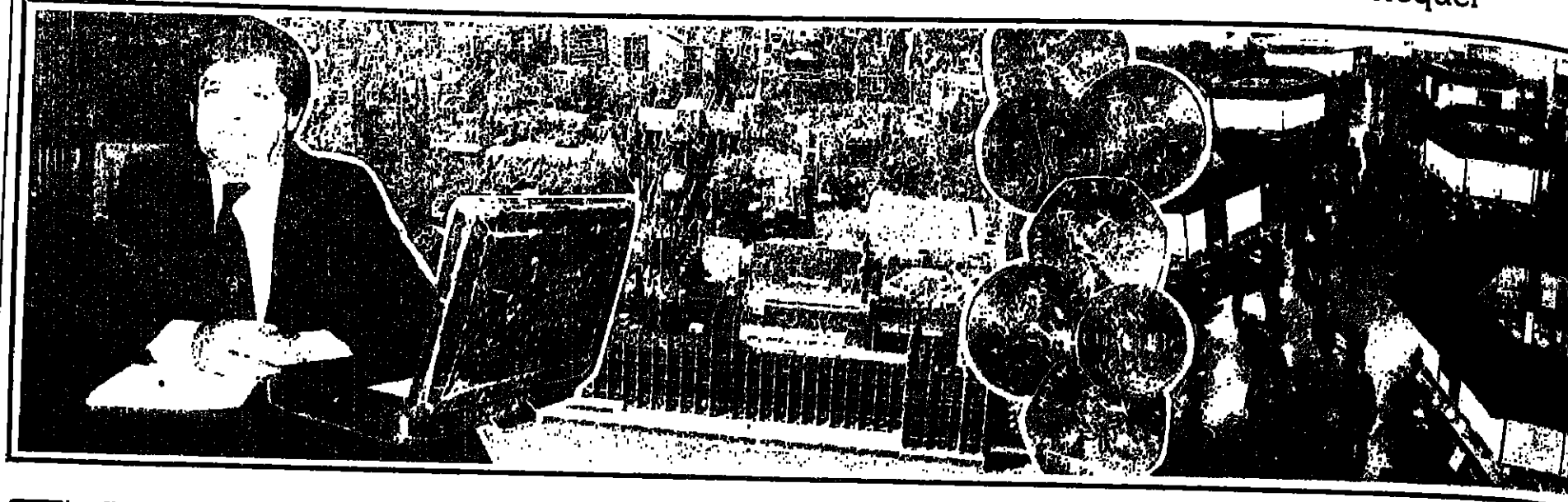
It is a very thorough package, and any student working through it systematically would emerge with a good knowledge of wordprocessing with Wordwise, including printing hard copies. This pack could prove an effective training system in circumstances where students work alone. However, I have reservations about its use in schools. The first require-

ment is for the student to read the first section of the companion booklet, which is rather wordy and is not illustrated at all. It is my experience that children (and adults, too) like to get their hands onto the computer and produce some text before looking into the intricacies of the system, and that too many words result in scanning.

A simple illustration can make a much greater impact than several lines of text, and it is a pity that the text in this package is not broken up in this way. Some prepared text to be keyed in for the first exercises would have been preferable. My mind always goes completely blank when asked to "type some sample text". A couple of helpful paragraphs would have been useful and could have been used later to illustrate other points. There are some very nice touches in the exercises, such as a hidden message in the deletion passage.

Learning should be fun, particularly something as exciting as wordprocessing, but I found working through this package rather hard going.

Money problems for the individual businessman or the Chancellor of the Exchequer



TREASURY

The *Chancellor* package comprises a book, a BBC Micro disc and an instruction leaflet. Macroeconomic simulations may normally be used from A level up to final degree, the questions remain the same, but the answers differ. *Chancellor* is equally accommodating, though the parallel text is pitched at undergraduates and would prove heavy reading for sixth-formers. It gives a synoptic view of modern macroeconomics, from the Keynesian, Monetarist and New Classical perspectives. The authors provide a rigorous treatment of IS/LM model analysis, which outlines lucidly the distinctions between the various rival schools of thought.

The simulation casts the user or teams in the role of Chancellor of the Exchequer, and shows how decisions to control the economy are affected by trade-offs and uncertainties. In order

Chancellor, A macroeconomic simulation game on disc for the BBC Micro with *Macroeconomics in Focus* by M Binks and A Jennings. Price £26.04 + £1.91 VAT. McGraw Hill House, Shoppenhangers Road, Maidenhead, Berkshire SL6 2QL. Micro, £8 each + £1.20 VAT. Banking Information Service, 10 Lombard Street, London EC3V 9AT. *Entrepreneur: The Complete Business Start-up Kit*, Book by D Juster and S Armstrong. Programs by N Sen and S William Collins plc, PO Box, Glasgow G4 0NB.

to bring out relationships clearly, the model economy is more responsive to policy changes than a real one would be, though provision is made for time lags after some decisions. An especially valuable feature of the program is that the authors have not

DAVID WHITEHEAD

included random shocks. These can add spice and realism to such simulations, but distort the results of decisions and render their effects obscure. This reduces the educational value of microsimulations by encouraging guesswork. Users are able to identify the main economic relationships without being confused by external events. Players have to manage an economy over an eight-year period, by manipulating five controls - income tax, the money lending rate, value added tax, government expenditure and money supply. They can also choose to give equal weight to both unemployment and inflation, or to regard one objective as predominant. If a team decides, for example, to concentrate on reducing inflation, they will be more heavily penalized for generating inflation than if they had adopted a neutral policy. Points are awarded for expenditure on consumption and investment in both private and public sectors, and for achieving a trade surplus. They are subtracted for unemployment, inflation and trade deficits. The program helpfully plots graphs of the gross national product, the rate of interest, inflation and unemployment, and each "year" 14 indicators are displayed to assist decision-making.

The simulation can be used with up to 10 teams, and players are not even required to access the micro in rotation, since the program retains each one's position. Additional flexibility comes from the user's ability to change certain key variables before starting - investment sensitivity or the marginal propensity to consume - thereby altering the way in which the model behaves. This allows them to explore the implications of different underlying economic relationships and prevents the game's educational value from being reduced through repetition or over-familiarity. Though expensive, this very well devised and presented package is strongly recommended for all macroeconomics courses.

Finstat is a financial statistics database which is primarily suitable for A level students. It is more accessible than earlier attempts and will prove invaluable for teachers with easy access to micros. To use such a database properly requires someone on tap in the classroom, with a microcomputer permanently available. This is unlikely in any school economics department. The program enables limit series and balance sheet data to be recalled, modified and presented in the form of line and bar charts. It can also be used for the straight recall of current information - for example, on bank loans, the money stock, the unemployment rate, or the current balance of trade. Although the range of pos-

1970 financial data are included.

A helpful section in the teachers' notes illustrates how the package might be used by demonstrating a variety of ways in which the data may be related. The authors also suggest several possible investigations using the statistics provided. This unit should become a permanent constituent of the teacher's stock-in-trade, since it is to be amended annually. *Money Problems* is aimed at 13 to 16-year-olds. The four programs cast the student in the role of a bank manager, who has to advise customers on a range of problems. Each unit is brief and simple, and could serve admirably as introductory stimulus material, but thorough follow-up work will be required.

Dossier 1 asks the bank manager to advise three customers on money transfer problems. Should they use a cheque, a standing order or direct debit? The "correct" answer for mortgage repayments is "by standing order", but direct debits are increasingly common with variable interest rates. The second case illustrates the use of a bank budget account and the third asks the manager to advise on saving schemes with bank, building society and assurance schemes all offered. One couple wants to save for a mortgage, and the "correct" answer is a bank home loan saving account rather than a building society save-as-you-can scheme. Is this disinterested advice?

In the final dossier the purchaser of a microwave oven requires credit and the bank manager advises whether shop credit, credit cards or personal loans are best. No prizes for guessing which is recommended. A useful glossary of terms is appended.

Trading Firms consists of a four-program suite on international trade aimed at GCSE and first-year sixth-formers. The first program simulates the impact of exchange rate changes on the purchase of raw materials, with clear and helpful teachers' notes. One minor drawback is that if the student gives the correct answer, the program does not supply the reasoning, so the right response could have been given for the wrong reason. The second program concerns the purchase of foreign currency on spot or forward exchange markets. This is an outstanding exercise for developing an understanding of current and future transactions. The teacher is assumed to be able to explain why rates change as a result of various news events.

Exporting - the Pricing Decision, students have to set a price for profit maximization in an overseas market where changes in the exchange rate have a significant impact on the price of their goods. This is a quite advanced economics unit which able students. Finally, a team game based on a UK knitwear company brings together various elements from the other simulations.

The company faces fluctuating exchange rates and must decide when to purchase its raw material and when to sell its output in the UK and USA. Each decision period is disturbed by news event and the teams must anticipate its effect. Also, company costs and demand for its product vary. These reasonably-priced units are strongly recommended for teachers who have ready access to a micro-laboratory.

Entrepreneur: The Complete Business Start-up Kit is designed to help users manage the complex process of determining whether a proposed business venture is likely to be successful. The accompanying text is spiral bound so that it may be used in conjunction with the computer by standing it inside the computer box.

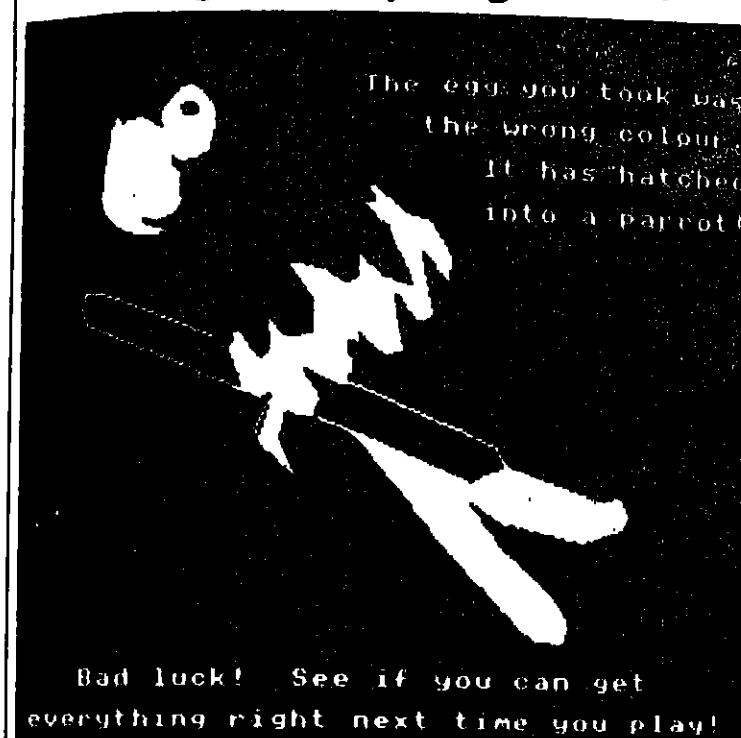
The teaching program provides a budding business person ("man in the text") with a full understanding of the concepts required to analyse a business start-up, such as the balance sheet and profit analysis. This should be a boon to commercial teachers, especially the clear explanation of break-even analysis.

One unnecessary oversimplification is that we are told that a business may have one of three forms - a trader, partnership or limited company. The growth of workers' co-operatives in recent years is ignored. The applications program aids in detailed information about the financial aspects of the user's business, and from this will produce monthly cash flow forecasts, year end balance sheet, profit and loss account, and an analysis of the results.

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Adventures

GERALD HAIGH

Dinosaur Discovery, Jacaranda Software. Disc for the BBC Micro and Master series, with teacher's manual, exercise books and worksheets, £18.40 incl. 4 Mation Educational Resources, Linden Lea, Rock Park, Barnstaple, North Devon EX32 2BA. *Early Maths Faces*, Nasty Games; *Grid Games*. Disc for the BBC Micro and Master series. System Software, Eigen Publications, 12 Collegiate Crescent, Sheffield S10 2BA.

Graph Builder £11.50 + VAT; *Jolly Jack Tar* £12 + VAT; *Wizard's Return* £16 + VAT. All for the BBC Micro and Master series. Sherston Software, 8 Court Street, Sherston, Malmesbury SN16 0LL.

Dinosaur Discovery is a cross-curricular adventure game of a kind which may teachers love and use very successfully. An explorer has found a nest of dinosaur eggs and has developed a way to hatch them. Unfortunately he has died, and only an incomplete notebook is left. Ideally, the children are introduced to the notebook and do a great deal of discussion and perhaps other classroom work before they even realize that a computer activity is in the offing. The better the preparation, the richer the experience in the end.

The start of the program has a familiar feel. You go into a shed, inside are compass, torch, rope, watch, axe and bag. You can only take five of these. As the quest develops there are numerous puzzles and tasks, and the teacher's handbook gives suggestions for further "off the computer" activities. If you and your class like this kind of thing and have been waiting for a new one, you will be well pleased. But be warned that, as with all such programs, careful teacher preparation is necessary. You simply cannot depend on keeping up with the children, and it is yet again a matter of poring over the screen while the night falls outside and the cleaner sweeps impatiently round your feet, even with the aid of the teacher's "cheat" instructions!

Early Maths consists of three programs in ascending order of age suitability, which together are intended to span the whole school population from five to 16. *Faces* uses the notion of a face and its

components - mouth, eyes, hair and others - to provide a variety of matching and sorting activities for young children.

Grid Games gives junior children lots of competitive activity intended to reinforce place value. As the title suggests, it gives children the opportunity to be joyfully "nasty" to each other. I found this happy ingredient to be a great motivator, exactly right for the age group, just as the choice of the human face was right for the basis of the first program.

Grid Games is about multiplication and division, and provides a tremendous range of activity based on the patterns and relationships created when a number is broken down into factors or built up from multiples.

The three programs are models of good practice. They tackle real needs in areas eminently suited for the computer, and they are presented simply and clearly, with good teacher control.

Graph work is a staple part of the maths curriculum at all levels. The problem is that because it is quite easy to do interesting and visually-attractive work, the level of teaching and learning too often remains at an elementary level.

Graph Builder gives the teacher an imaginatively-produced tool for teaching the principles of graphic presentation. It can be used simply for demonstration against the background of an existing syllabus, or it can itself form the basis of teaching the topic at upper junior or secondary level. Pictograms, histograms, pie charts and line graphs are covered, and children's work can be printed out.

Jolly Jack Tar is designed to help junior school children to understand the two musical fundamentals of pitch and rhythm. There are six games which invite them to do tasks such as tapping the rhythm of a tune or deciding whether a note is higher or lower in pitch than a previous one. The graphics are lively and provide good reinforcement of the concepts. The reward for success is the chance to make Jolly Jack Tar dance a hornpipe by pressing designated keys in time to the music.

The infamous BBC sound is always the great weakness of music programs for school, but having made this particular educational bed, we must continue to lie on it!

Wizard's Return is a lovely maths adventure game, which is a sequel to the popular *Wizard's Revenge*. The quest is to rescue the Dragon King from beneath the sea. There are two discs, one which will last about half an hour and needs to be done in one sitting, and a longer one which can be left and returned to. A rich variety of mathematical experience is provided, as well as a great deal of simple logic. Difficulty levels can be set by the teacher in some key areas. The suggested age range is 9-11, but it should find a place well into the middle years.

bits

COMPUTING COURSE

City and Guilds are proposing to run a new course called "Basic Competence in Information Technology".

It will be aimed at all Britain's sixth formers, to give them the opportunity of gaining a certificate of computer competence, which is fast becoming almost as fundamental as reading and writing.

The course is sponsored by the CBI, British Aerospace, the Department of Trade and Industry and the Information Technology Skills Agency; and is the result of co-operation between industry and education during Industry Year.

The pilot scheme for the course will involve some 40 schools, both independent and maintained, and two Information Technology Centres. It will run for one year and, although aimed primarily at sixth formers, it will not be restrictive and will be available through a wide range of centres.

Further information from the Confederation of British Industry, Centre Point, 103 New Oxford Street, London WC1A 1DU, or Section 18.

City and Guilds of London Institute, 46 Britannia Street, London WC1X.

OPEN UNIVERSITY

The Open University is planning to make home computing facilities available to 30,000 of its 127,000 students as soon as manufacturers and suppliers are able to make them suitable for PC/DOS/MSDOS operating systems.

All enquiries to be made to Annette Mathias at the Open University on 0908 653248.

POCKET BRAILLING

Insight Electronics, manufacturers of aids to the blind, have this month launched their Pocket Brailier, supporting Tape Embosser and IBM Interface.

"The Pocket Brailier" is an electronic note-taker and education aid for the blind, and, unlike other machines, is only the size of a pocket notebook. It consists of the standard seven braille keys which braille in the usual way. Internal batteries give unattended protection for the 8,000-character memory for at least six months and recharge automatically from the computer. "The Pocket Brailier", with complete package for use with a BBC Micro, costs £230. A grant is available towards the cost for the disabled, students and others who need it for work.

BOOKS FROM PRENTICE-HALL

The Impact of the Computer on Education

A course for teachers
SEAMUS DUNN AND VALERIE MORGAN

Designed as a course text and focusing on educational rather than computing issues, this timely book will be ideal for in-service and trainee teachers wishing to familiarise themselves with the implications and potential of the growing use of computers in schools. Topics include: Logo, Artificial Intelligence and Learning, Databases, Videotex, Wordprocessing and Classification of Software.

December 1986 192 pages
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PHILIP BARKER AND HARRY YEATES

Concentrates on the development, application and evaluation of CAL systems, methods and aids. Topics include: Computers in education and training, preparing course material, interfacing different media with computers and the way forward for CAL.

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A general and wide-ranging introduction to computers and their applications from two respected authors who pose the questions: What is a computer? What can it do? How can you communicate with it?

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1986 220 pages
13-069295-6 £10.95 \$16.95

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PAUL BEVERLEY, NIGEL EAMES AND GEOFF OSBORNE

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For further information please write to Jean Walmsley at the address below

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Prices exclude VAT
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Rochford, Essex SS4 1NE.

The usefulness of peripheral hardware connected to a computer is largely determined by the effectiveness of the software. In this respect the *Plotmate* by Linear Graphics is very much a success.

The *Plotmate* is a flatbed plotter. It is easy to use with both pen and paper that fix easily, a tiresome difficulty with some of the more expensive plotters. The plot speed can be varied but is impressive for its size and cost. One distinct advantage for the use of the *Plotmate* in schools is its direct use of the BBC VDU commands. The *Plotmate* software intercepts the commands and the plotter does the rest. This would be particularly useful in the development of projects within the school computing department. Many of these projects suffer from a low standard of "paper presentation" when the actual screen designs are impressive. With this plotter high-quality multi-coloured paper output will be possible. As well as the graphics, text can be printed. The VDU 23 command enables the parameters to be set for text, height, width, slant and orientation.

The enabling software is loaded and sets the function keys. The BBC computer can then be programmed in BASIC as usual. The *Plotmate* can be brought into operation for program runs with the appropriate function key.

A useful feature is that it can be driven from either the printer port or the user port, a thoughtful alternative by Linear Graphics, with both ports



now in increasing demand in the schools. The plotter is capable of advanced graphics, which include triangle and block-fill commands, variable shading patterns and extended character set.

Linear Graphics have also developed some very good additional software that widens the potential use of this peripheral across the curriculum. Hence its attractiveness for schools.

Map design is the main purpose of *Linnap*. This piece of software is perhaps inappropriately named as it can be used for a wide variety of drawings. However, as the file created by *Linnap* can be included in other programs, it can be of serious use to the geographer. A teacher could add

labels to a base map and produce an overhead transparency slide very quickly.

The *Linnap* drawing can be controlled by a mouse or trackball and is very easy to use. A further feature is that the output with a map in one box and text in another. This is very accommodating for the finished product in many aspects of the curriculum, such as geography fieldwork projects.

The *Plotmate* does not require "special paper", though cheap paper will not produce quality output, but when financial restrictions abound, development work could be done on lower quality paper with high quality being introduced for the finished product.

Other software includes *Linscan*, a package for sign design and writing. This is a useful addition to the creative side of computer use and an area where useful tools are frequently lacking.

While the majority of schools will rely on Basic, the *Plotmate* can be used with LOGO and so opens up areas of the curriculum like mathematics.

An optional extra is a scanner. This fits into the pen holder and is connected to the user port while the plotter is accessed through the user port. It seems a diagram which is then reproduced on the screen and can be stored in a file and used in a Basic program. It works well and offers a tool which could be used in many areas of the curriculum. But at £28, it is probably too expensive for schools.

Overall the *Plotmate* is an impressive product with good plotting quality and very good software at a relatively cheap price. However, in the current financial climate a large expenditure must be substantially justified if a school is to purchase such a peripheral. As schools look to more use of computers across the curriculum, as well as the Computer Studies department, the *Plotmate* represents a very valuable tool for creative work.

Science and electronics

Miscellanies

ERIC DEESON

Air and Weather
Two discs for BBC Model B and the first Master series, £19.95
Osmroid Educational, Osmroid Works, Gosport, Hants PO 13 0AL.
Key Facts Revision: Physics
Two cassettes for BBC B/Electron or Spectrum 48K; £11.50 incl; disc for BBC Model B or Master series, £14.95
Letts & Co, Diary House, Borough Road, London SE1 1DW.
Nuclear Reactor: Circuit Boards
40/80-track discs for BBC Model B and Master series £15+VAT; Econet £30+VAT
A/V Computing, Hocker Hill House, Chesham, Gwent NP6 5ER.
Digital Electronics: Pack 1
"Coding Information"
Disc for the BBC Model B, £14.95+VAT
Addison-Wesley, Finchampstead Road, Wokingham, Berkshire RG11.

This is a very wide selection of BBC disc-based software, wide in the range of styles as well as usage.

Air and Weather is for teacher use, with one disc for producing copyright-free, customized practical worksheets around graphics illustrations which are provided, and a second carrying a number of animated graphics routines for class discussion. The programs, supported by a brief but excellent booklet and a summary card, are part series. The printed support is in turn supported by a booklet of off-disc text, which though the results to learn, is accessible to teachers who don't feel they have much time to spare with their pupils.

provide the basis for several weeks' excellent work. The software does not run fully on the Master.

Letts' Key Facts Revision: Physics software is good solid drill and practice, but well varied. There are 10 menu options altogether, five on each side of the floppy 40/80 track disc - kinematics, dynamics, geometric optics, radioactivity, electricity, electromagnetism, calorimetry, relationships and diagnostics. There are plenty of objective test sequences, but a lot of the material presents comparatively unusual problems based on graphical displays and there are simulations to work with too. A tiny booklet gives barely adequate guidance, but there are some quite good help routines in the software.

Suitable for students coming up to 16-plus examinations and equivalent, this material is not as harmful as many teachers would doubtless consider it to be. It may be stolid, and some screens are badly cramped, but many learners could gain much from the occasional hour with it.

A/V's Nuclear Reactor is a splendid example of page-turning software with graphics-animated textbook. One passes through the material in a basically linear fashion, meeting plenty of text (not always grammatical) and plenty of simple but effective animated graphics on the Master micro: as well as the Beeb, offers a lengthy graphics page-turning routine on the Magnox (and AOR) reactors: a set of 27 multiple-choice questions; and a simple but effective interactive simulation of running a nuclear pile.

The program is claimed to be suitable for learners of 12 upwards. Maybe that's why the question of isotopes is almost totally omitted, both in the software and in the low accompanying pages of notes.

Circuit Boards, from the same company, is a more substantial piece of software. It is a BASIC program which allows the user to design and implement a circuit board. The author is to be congratulated on the concept and implementation of this material. Digital electronics courses at all levels are sure to benefit.

build up Worcester-type circuits on boards on screen, with up to three cells, eight connectors, four resistors, four switches, four lamps and four diodes. Current readings are displayed as appropriate and lamps light up if they should. Agreed, one should not use simulations of simple important experiments like Worcester circuit board work. All the same, the temptation is strong - this is a good program and suffers none of the real-life problems of dodgy connections, dead cells and dodgy components. Here too short circuits produce screen error messages rather than being costly and annoying disasters.

Finally "Coding Information", Pack 1 of Addison-Wesley's *Digital Electronics* course. As this is written by Bob Sparkes, we can expect it to be good - and it is. There is, though, the problem of replacing real-life hands-on experience with computer simulation; as the blurb says "students... study... the basic principles... without these principles being obstructed by the practical problems of connecting devices together."

This is, however, a splendid course. It expects no prior knowledge other than basic electricity and is accessible at many levels though it is originally envisaged for the curriculum requirement of Scottish Highers. The book itself is embodied in the book, a 23-page volume with good text, lots of illustrations and a wealth of questions (with answers at the back). The four programs (which run on the Master) respectively simulate digital to analogue conversion, simulate AND and OR gates, give practice in simple 8-bit control language. There is also some BASIC programming in the book. The author is to be congratulated on the concept and implementation of this material. Digital electronics courses at all levels are sure to benefit.

Tomes

ERIC DEESON

Mastering Assembly Code, By Richard Vialls.
BBC £8.95, 0 563 21142 3.
Running MSDOS, By Van Wolven.
Microsoft £19.95, 0 914 84588 3.

There's a nice contrast here between the old computer technology and the new. Vialls' book is something like the millionth course on low-level programming with the BBC Micro to have appeared in the last five years, while Wolven provides a heavy tome on MSDOS, the operating system of the new wave of "16-bit" micros.

Vialls' treatment of BBC assembly work is outstandingly good. He has a precise and concise style, and his pages with neatly communicated theory and plenty of clear examples. The assembler cult has tended to die down in recent years, outside the minds of the fanatics anyway, but it is growing again now with the practical purposes of control and robotics to use it on. The book is timely, therefore, and deserves to do well. It's a great drawback that there's no index, though.

Orbiting Mercury

Jim Weir previews Queen at Wembley



Queen's *Real Magic* Channel 4 independent local radio stereo tomorrow, 11 p.m.

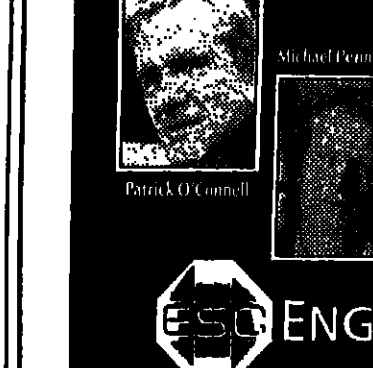
Had Live Aid been held in 1970, we'd still be waiting for The Who's soundcheck. It was always my theory that there never were that many drugs at the old rock festivals. The truth was that the crowds were driven insane with haemorrhoids and boredom. You had to have to sit around for hours on wet grass, listening to feedback as they tested the amps. Then, eventually, another hour of feedback while they played and if that really was them up on stage half a mile away.

These days it's all hardboard flooring, chip technology, radio mikes and poppyhead timing. Not only can you hear every note, giant video screens mean you don't have to be with the band. It's a pity that the Who's *Real Magic* at Wembley last July was saying that a greater than life-size image of Freddie Mercury was gliding the lily just a bit. Not one of your retiring, quivering, nick-nicky Freddie.

As Live Aid showed, Queen have become one of the essential live acts in pop. Channel 4 (who would, wouldn't they?) go as far as "the greatest live band in the world" but then they have to persuade us to stay up late tomorrow night and get the wireless tuned in as well. For this is the first "simulcast" to be done in tandem with independent local radio. It certainly looks worth a few bags under the eyes.

The Donkey Prince

The Donkey Prince



The Donkey Prince is a unique form of theatre, involving neither props, costumes, sets, lighting effects nor musical instruments. With only a plain platform to play on, the Himawari Theatre Group held spellbound a packed audience of children aged from four to thirteen for one and a half hours.

This magical effect was achieved by 10 actors who became not only Kings, Princesses and Wizards but, astonishingly, a cave, a castle, creaking doors, water, a bouncing ball, the moon rising, a window with opening curtains, a lake with swans. Grimm's story of the Donkey Prince, unfolding as a tapestry of beauty, happiness and simplicity, was told simultaneously in Japanese, English and mime though a lovely and expressive kind of hand-language.

The Donkey Prince

The Donkey Prince

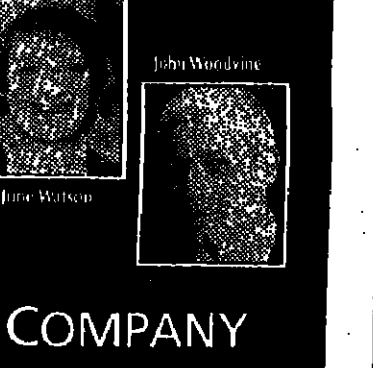


At the heart of the piece is music. A moving moment comes when the ugly, unloved prince with the shape of a donkey is taught to play the lute by a teacher who has the wisdom to leave his pupil alone while he learns. And it is music which gives the donkey-prince admission to the castle and to the heart of its princess.

While deeply rooted in traditional culture, the play has a distinct feel of modernity enhancing its accessibility. Some seven thousand of Sunderland's young people have benefited.

The Donkey Prince

The Donkey Prince



Further information about 1 Bertolt Brecht from *Carole White, Good Company*, 0622-871002; and about *The Mother from the Education Department, National Theatre, South Bank, London SE1 (01-928 2033).*

Hugh David

Television

Spoilt for choice

The final credits of *A Week in Politics* (Channel 4, October 17) unrolled over scenes of children painting in a Southampton classroom. The programme had examined the state of the Conservative Party, looking at constituency matters down Howard's Way and not least prepared for what Nick Ross cautiously predicted would be a June election. But those final pictures were significant. However much Norman Tebbit might insist that his party was the only one with a credible defence policy, it was education and health that preoccupied the voters in Southampton. Unless something happens to persuade them that the real issues of Britain's defence are being debated in Westminster (and not in the back of a car), education and health will be among the deciding factors when we go to the polls.

When a subject gets that much media attention, discussion about it becomes ritualized. Having listened for some 10 minutes to assertions of a "breakdown in trust" between parents and teachers, Robert Keir (7 Days, Channel 4, October 18) put on a pained expression and asked: "trust over what?" We must trust the professional of the teachers', the representative parent was saying a few minutes later, despite Keir's request for a more concrete use of language.

There was the usual chorus of approval, too, for the principle of parental choice, until it came to the specific matter of sex education which was sensibly dismissed as "the government's attempt to distract our attention" from more serious defects in the system. Perhaps anticipating that this privatization of sex education, returning it to the domain of cottage industry and playground speculation, will leave a gap in the market, the BBC is offering us *The Trouble with Sex* (Wednesdays, BBC2 10.25pm). This brings together real-life therapists and actors who represent sufferers from various malfunctions in scenes of therapeutic role-play (Special Discretion Not Required). No one could accuse the programmes of failing to mention

the context of "loving relationships", but the optimistic conclusions and cosy consulting-room atmosphere still manage to suggest that it is largely a matter of mechanics.

The best-prepared fiasco of the week was Birmingham's bid to host the 1992 Olympics. Since everyone was correctly predicting that the games would be awarded to Barcelona, the Bid (BBC1, October 15) and *Going for Gold* (Channel 4, October 16) amounted to one hour and fifty minutes looking at a jilted suitor preparing to be left at the altar. Channel 4 at least surveyed the opposition and, I thought, pleaded Brisbane's suit rather well, while *The Bid* simply laid the ground for Birmingham's subsequent complaint of unfair tactics by the other contenders. But compared with the wheezing and dealing that goes on when marriages are arranged in most parts of the world (see *Lovelace*, BBC2, Sundays 9.30pm), the wooing of the Olympic Committee was pure Mills and Boon, involving gold telephones for them to whisper sweet nothings to the city of their choice at any time of the day or night, and helicopters waiting them from lavish banquets to the dream stadium where the affairs would ultimately be consummated.

If a Black youth joined the police force now, he would be ostracized by his friends. Frank Critchlow founder of the Mangrove Restaurant in Notting Hill (Open Space, BBC2, October 16), gives some substance to that vague term "community leader". World in Action ("Death is Part of the Process", ITV, October 13) uncovered the hypocrisy behind the claim by the management of the Kinnors mine that it was "humbled at the sacrifice that others have had to make in our joint pursuit". South African mine-owners could have had no doubts about the dangers of using polystyrene foam for lining shafts and the country's safety rating system was described as "an entirely bogus scheme", concealing an appalling record of accidents.

There are no lectures; this is a production to be enjoyed. None the less, the key Brechtian concepts of Alienation and Epic Theatre come across more clearly than they ever can from books. Ms Pomeroy obviously knows her subject (she is, after all, one of the few British directors to have had a residency with the Berliner Ensemble).

Robin Buss

ARTS

Epic tour

1 Bertolt Brecht.
Good Company tour.
The Mother.
National Theatre tour.

Director Sue Pomeroy's documentary drama *1 Bertolt Brecht* has already had a triumphal career. Originally staged at the tiny Croydon Warehouse Theatre, last year it was taken up by the National Theatre's Education Department and given an extensive and highly successful tour.

Now, a newly-revised version is on the road again, quartering the country from Portsmouth to Durham with a punishing nine-week run of one-night stands. Although intended for general audiences, these performances should be of particular interest to schools and college drama departments, for in both form and content *1 Bertolt Brecht* is a first-class introduction to the life and work of the playwright.

With a company of just four and the bare boards and white lights typical of his own Berliner Ensemble productions, it allows Brecht to speak for himself. Apart from a few sentences of basic biography, every word spoken - or sung - is his. There are scenes from *The Threepenny Opera*, *Mother Courage and the Restless Rise of Arturo Ui* as well as from less familiar plays like *Baal*. There is also Brecht-Weill and Brecht-Eisler songs and, perhaps most interesting of all, 10 poems chanted to musical accompaniment as Brecht originally intended them.

There are no lectures; this is a production to be enjoyed. None the less, the key Brechtian concepts of Alienation and Epic Theatre come across more clearly than they ever can from books. Ms Pomeroy obviously knows her subject (she is, after all, one of the few British directors to have had a residency with the Berliner Ensemble).

Magic moments

The Donkey Prince: From a collection entitled "The Bewitched Princess". Himawari Theatre Group, Tokyo. Washington Arts Centre, Sunderland, as part of the recent Japanese Festival.

"Sugeki" is a unique form of theatre, involving neither props, costumes, sets, lighting effects nor musical instruments. With only a plain platform to play on, the Himawari Theatre Group held spellbound a packed audience of children aged from four to thirteen for one and a half hours.

This magical effect was achieved by 10 actors who became not only Kings, Princesses and Wizards but, astonishingly, a cave, a castle, creaking doors, water, a bouncing ball, the moon rising, a window with opening curtains, a lake with swans. Grimm's story of the Donkey Prince, unfolding as a tapestry of beauty, happiness and simplicity, was told simultaneously in Japanese, English and mime though a lovely and expressive kind of hand-language.

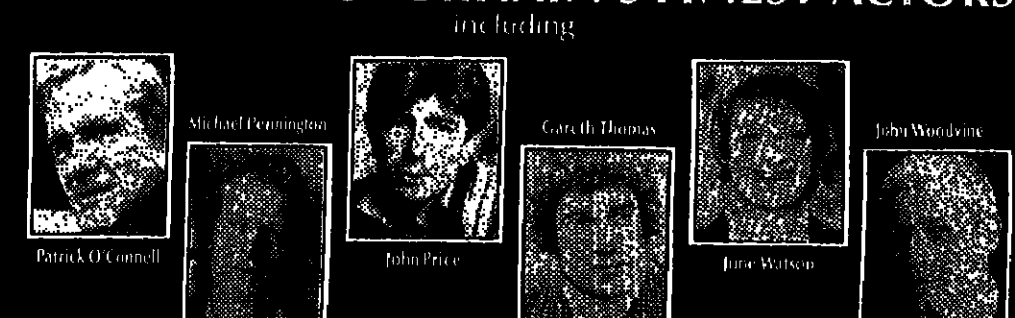
At the heart of the piece is music. A moving moment comes when the ugly, unloved prince with the shape of a donkey is taught to play the lute by a teacher who has the wisdom to leave his pupil alone while he learns. And it is music which gives the donkey-prince admission to the castle and to the heart of its princess.

While deeply rooted in traditional culture, the play has a distinct feel of modernity enhancing its accessibility. Some seven thousand of Sunderland's young people have benefited.

D M Oliver

David & Ed Mirvish in association with the Theatre Royal Plymouth present

A COMPANY OF BRITAIN'S FINEST ACTORS



ENGLISH SHAKESPEARE COMPANY

HENRY IV Parts 1 & 2

by WILLIAM SHAKESPEARE directed by MICHAEL BOGDANOV

THE THRILLING STORY OF ENGLAND'S TURBULENT EMERGENCE FROM THE MIDDLE AGES INTO THE MODERN WORLD

3-5 Nov 1986	Plymouth Theatre Royal (0752) 669595
12-22 Nov 1986	Cardiff New Theatre (0222) 394834
21-29 Nov 1986	Norwich Theatre Royal (0603) 628205
16 Dec 1986	Nottingham Theatre Royal (0602) 422428
8-13 Dec 1986	Bath Theatre Royal (0225) 65065
27 Feb 1987	Thill New Theatre (0482) 20463
9-14 Feb 1987	Sunderland Empire Theatre (0783) 42517
16-21 Feb 1987	Feeds Grand Theatre (0342) 459351
23-28 Feb 1987	Oxford Apollo Theatre (0865) 244544
27 Mar 1987	Manchester Palace Theatre (061) 236 9922
9-14 Mar 1987	Birmingham Hippodrome (021) 622 7186

SPECIAL PRICES FOR SCHOOLS AND STUDENTS AT ALL VENUES

RESOURCES

Dance in an old fashioned way

Dance Instructions Booklets by Peggy Dixon and Junella McKay; tapes by Eglinton Productions. Prices from £8 - £12 for each booklet and cassette tape. Available from 6 Brook Drive, London SE11 4TT.

These booklets are based on the teaching repertoire of the Nonsuch Summer School in Early Dance, which are held annually and directed by the author. Each volume covers dances from different periods, starting with Medieval to 15th-Century French Renaissance.

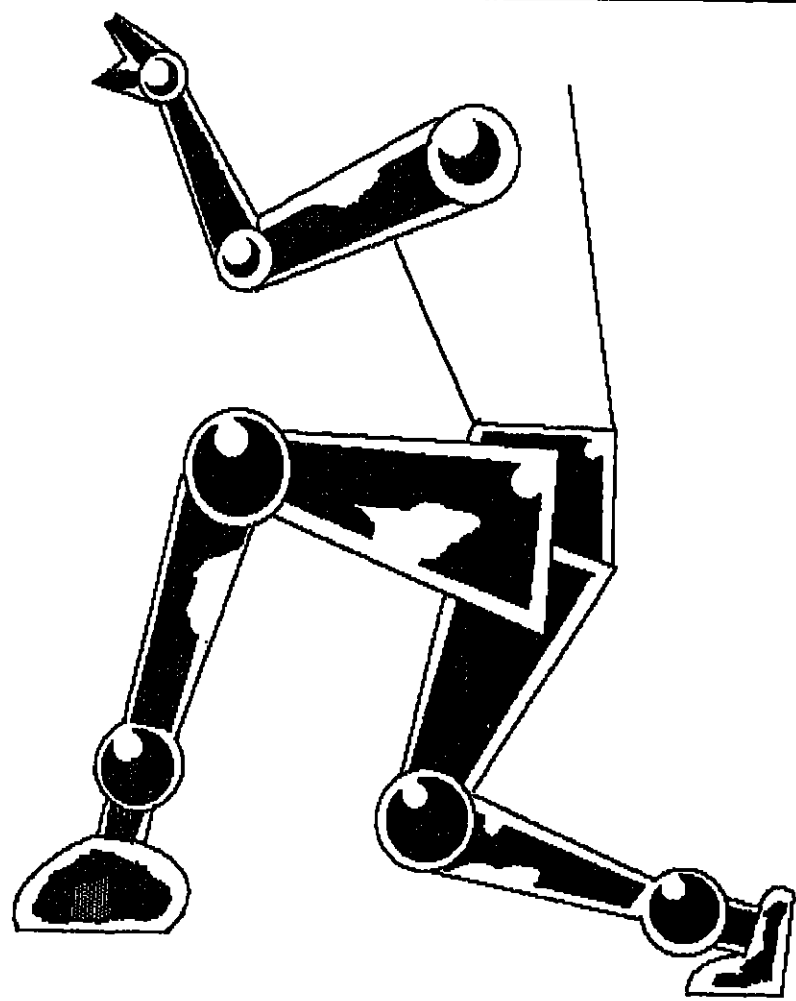
Then there are Italian Renaissance and Curoso and Negri Dances: two volumes of Elizabethan Dances which include dances from Playford's *English Dancing Master*; and *English Country Dances of the 17th and 18th Century*. The final two volumes, still in preparation, are *Ballroom Dances of the 17th and 18th Century* and *Latin 18th and 19th Century Dances*. Each volume is accompanied by specially-produced cassette tapes with clearly identified musical accompaniment played in the style of the period.

The booklets contain background of the period and detail the source material from which the dances are drawn. The documented historical sources provide both the flavour and feel of the period and extensive material for further study. The author acknowledges that further details would be useful, and perhaps, visual and photographic sources of some of the reconstructed dances.

The description of the dances is written in a clear and easy-to-follow manner, but assumes some practical knowledge of Early Dance. The author is careful to point out when original source material has been adapted, and gives very useful advice on how to teach and present the dances. The cassettes, which are an essential adjunct to the written texts, are very well produced and present an illuminating aural history of Early Dance music.

These volumes and their accompanying music represent an important source for the serious student of dance. For the teacher in the secondary school who wishes to include dance in period style for an opera or drama production, the booklets will offer a wealth of information. However, teachers with no practical background in Early Dance should be cautious in their reconstruction of some of the material. Early Dance, like early music, is a field of study in its own right. Enthusiasts need now to make a convincing case for the inclusion of their subject in dance courses at college, university and secondary school level.

Sarah Stevens



Steps towards the future

Judith Mirzoeff visits 'Skills in Action', a half-term exhibition at the Science Museum

Skills in Action
Science Museum London
October 20-November 2

What have Bruce Oldfield, Radio Rentals and Rank Xerox got in common? They all use equipment on display now in the Science Museum as part of the exhibition 'Skills in Action'. It is that the old image of factory work as boring, repetitive and dead-end should be replaced by one of trained staff operating computer-controlled processes which do much of the drudgery for them.

The exhibition has been organized by the City and Guilds, which co-ordinates and monitors technical training, mainly for young people, in a wide range of skills. Also participating are a number of colleges and companies which co-operate with them in sand-winch courses or in providing training on a particular machine. Space has been made available among its machines by the Science Museum, and financial backing by the Clothworkers Company.

The keynote is set by an exhibit in the entrance hall, which will remain until the end of the year. Its object is to link training with the needs of everyday life, represented by diagrams of a typical house and a typical factory. Light up a point on either, by pressing a button, and you get a screenful of information on the skills needed to make and maintain that area. The wonder - and frustration - of the

Science Museum's push-button approach to learning is thus incorporated.

In order to discover what Bruce Oldfield, one of London's leading fashion designers, has to do with this, you must find the London College of Fashion exhibit on the second floor. A sketch drawn on a touch-sensitive pad will appear on a screen, and colour can be blocked in by scribbling. Press a few keys and the colour changes; doodle some more and flowers are added. The somewhat digitized result was appreciated by the students learning to use the system because it was much quicker than making real sketches. Mr Oldfield was seen using a similar system on TV during the recent London Fashion Week, and certainly this was the only display to attract anything approaching a crowd during the summer week of the show.

The Nimbus equipment can't yet turn a dress design into a paper pattern, but the London College of Furniture showed computer-aided weaving design, which could be translated into cloth. New designs entered on the screen are converted into the computer, so when the pattern and colours are chosen, the loom can be set to make the cloth. It is satisfying to get an end product related directly to the picture on the screen. The end product of the document production and laser printing assembly shown by the Rank Xerox Information Technology

Centre at Slough is a personal printed certificate. Words and pictures are created on the computer screen via a keyboard, rearranged into a suitable layout and either stored or sent to a laser printer which will run off 12 sheets of high-quality print per minute. The young operators were as keen on their equipment as the trainee fashion designers. This training leads to the City and Guilds Information Technology Certificate.

Equal enthusiasm shown by the young technicians learning how to trace faults in videocassette recorders was not rewarded by a measurable number of spectators. As an extensive and interesting layout had been put up by Southgate Technical College and Radio Rentals to illustrate the Electronics Servicing course, this was a pity. This half term is a critical time for making career choices, and the whole exhibition can be recommended for its useful contribution.

It is also quite an exercise in orienteering, as the demonstrations are placed next to older machines which do similar tasks. Thus the Colchester lathe which makes plumb bobs can be found among the wood-turning lathes of an earlier age. A map is provided and it would be an error to try to find many of the exhibits without it. Should you make this error, you can always leave via the Sketchley display of the latest in shoe repair machinery, where you can have your shoes mended by a young man who has never done such a thing before.

Richard Evans

Railway history

A Study Kit on Railways
Price £3
The Kent and East Sussex Railway, Tenterden Town Station, Tenterden, Kent TN30 6HE.

This is a comprehensive kit of about 35 separate printed A4 sheets. Although there is obviously a lot of material about the Kent and East Sussex Railway, the kit is a great deal of offer to school parties, a great deal of the information deals with railway history in general. GCSE has been kept in mind by the authors, and the pack would make a useful extra resource in schools which make a particular study of railway history. It also demonstrates how a preservation society can make its resources available to a wide audience.

Gerald Hall

Whole brain living

Lifeskills Teaching Programmes Vol 1 by Barry Hopson and Mike Scott. Price £19.95 + £2.50 p.p. Lifeskills Associates, "Ashing" Road, Church Lane, Leeds LS16 6BN.

Lifeskills Associates have built up a considerable reputation for their developmental life skills programmes and manuals for schools and colleges. Indeed, they claim that three-quarters of all secondary schools in the United Kingdom have acquired the Teaching Programmes Nos 1 and 2. This third volume in the series updates their original scheme, now which uses a model of a hologram to develop a holistic view of life. The teaching, following the notion that everything relates to everything else, "learning, relating, working and playing, and developing oneself, others" are the fields in which life operates to contribute to what the authors refer to as "greater empowerment" of people leading to a more altruistic society.

This volume consists of an introduction to a holographic model of life skills teaching and four sections, each with its detailed explanation of rationale within the hologram model, and exercises. It covers "whole-brain living", creative problem solving, how to make decisions, and how to be effective parent of young children. The subject of each section is to try to extend the concept of personal effectiveness through such techniques as using both parts of the brain, the left and the right, so that students become "whole-brain learners".

To some this might seem to be shades of Aldous Huxley. It is not, by attempting to help students use their full intellectual powers. In explaining the notion of whole-brain living, the exercise called "What are we here?" introduces the notion of the different capacities of the left and right brain, asking students to explore the different skills attributed to each hemisphere of the brain. This volume is full of different ways of developing the student's creative potential as well as using and developing intuitive skills.

The section on parenting, by Vivienne Evans of TACADE, is an attempt to raise the status and priority within schools of what is termed "parenthood education", and also a clear statement and programme of how to explain to children the meaning of effective parenthood, offering an opportunity for pupils and students to explore their own beliefs about being a parent.

More secondary schools will buy this volume than the first two. More importantly, the quality of life skills teaching will be enhanced and the frequent muddled thinking as to its purpose will be put right.

Richard Evans

MEDIA



No easy salvation

Jenny Gilbert previews a new play and a documentary on Northern Ireland

SCHOOLS TELEVISION
Scene: Aspects of Northern Ireland
BBC 2, November 6, 7 and 15.

"Are you IRA... or Protestant?" Young Danny Flanagan replies with something of a smirk: "Protestants don't live where I live". To the local youths Danny is a glamorous figure, having come hotfoot from the "Troubles" to stay with an uncle in West London. They see only Danny's brusque, street-wise exterior, a toughie who has seen his best mate "blow up", and who gets his kicks from joy riding and taunting the local constabulary.

But the Danny Flanagan we see slowly revealed in the short 25 minutes of Ray Jenkins' excellent new play for Scene, is a bruised, perhaps permanently scarred sensibility; a lad who, like any other, needs to make his mark, but who, in a land "of bombs

and helicopters and damp three floors up" resorts to increasingly violent and mindless crime simply to feel he is alive.

"Tell me the good things about Belfast," pleads Kathy, Danny's pretty cousin, who has an eye to unlocking the softer side of his nature, and gently setting him straight. His answer is unexpected. "You're never bored. You know what is going to happen - with a brick or something or a pealer. There's something to walking about over there... as long as none of your ones is shot. But if one of your ones is touched - go mad".

Nobody Here Knows tells us a lot about the troubles, not least that people, especially young people, adapt to them. Danny seems almost to look for the tension back home, and to look for it elsewhere. But in the strong tradition of Scene's drama offerings, this play does not preach, nor even

pity. There is no easy salvation for Danny. And just like the critic who first needs to take the mote out of his own eye, we are tacitly urged to consider how far Danny's problems are typical of life in any city, not just Belfast.

Yet the sense of the province's geographical isolation from the mainland is made strongly through language. At times Danny's brogue is hard to comprehend and the teacher's most valuable tool will be the playback button. It is difficult to believe that the accent and dialect used here is, in fact, a much toned down version of what the researchers originally brought back on tape from Belfast. The brief teacher's notes offer a glossary: to go for a dander = a walk; go on the broo = the dolo; get a lacing = beaten up.

Violence and its effect on human nature is one of many resonant local themes effortlessly drawn into the

plot: parental and constitutional authority; impressing the peer group; what it really means to feel "alive"; even the love interest, all give pause for thought and scope for discussion.

Although complete in itself, the play should ideally be shown as an adjunct to the previous documentary, which deals more specifically with the religious / historical issues of Northern Ireland. This is an update of the programme originally screened in 1980; updated because, though not much has changed politically, two of the eight originally interviewed have since been killed.

Though the documentary's format is simple, there are of course no easy answers, nor even easy questions. A group of young Catholics describe their lives in the Short Strand area. On the other side of a main road, in the Woodstock, a group of young Protestants show us where they live. The two

groups know each other only from their nicknames sprayed on derelict walls on opposite sides of the "peace line". They agree to meet for the first time for a weekend at Corrymeels, the peace promoting centre far away from Belfast, and there they manage at least to examine, if not overcome, their prejudices.

With the highest penetration of any school programme on the air (one in every two schools is said to use it), Scene has a heavy responsibility to present its "issues" in an impeccably balanced way. In dealing with feelings rather than facts, and drawing no tidy conclusions, it succeeds in engaging both adolescents' sympathies and critical awareness.

Other Scene topics this term include nuclear power - do we have a choice? - and a linked film and documentary about boygirl relationships.

Cliff hangers



CHILDREN'S TELEVISION
Henry's Leg
ITV, Mondays and Thursdays 4.45pm.
When Ann Pulling wrote her novel *Henry's Leg*, she gave it a no-nonsense

northern setting and went on to win the 1986 *Guardian* Children's Fiction Award. ITV's enterprising Television South Company, TVS, bought the rights even before the hardback appeared and immediately began adapting it for television, relocating events to an "executive development" in the Medway towns.

The translation is surprisingly successful; so much so that Ann Pulling declared herself delighted with the look and feel of it. There are several reasons for this. The most basic that it is not really about life up north. There is certainly trouble at 'mill, but it's of a cops-and-robbers kind. Indeed, it is probably more pertinent to mention that the mill itself is derelict, and the boarded-up site the subject of interminable litigation.

The book (just out in Puffin, £1.75) and the series are firmly rooted in the post-industrial present. Henry comes from a broken home; his father has run off with a younger woman, leaving his mother to cope as best she can with a succession of temporary jobs, a prying neighbour and a fridge that doesn't

shut. Henry is even worse affected. An only child, in his final year at Junior school, he is reduced to a broken-hearted loner. His only interests lie in collecting junk and making money, even if this means searching out and selling squashed hedgehogs.

But for all its social and psychological acuity, *Henry's Leg* is an entertaining and fast-moving adventure story. After "Hen" finds part of a tailor's dummy in the street, there are all the usual shocks and chases and real cliffhangers at the end of every episode. Despite a few shots which might seem unnecessarily tricky, the TVS production very successfully integrates both sides of the story. Full marks to them for attempting it and to young Courtney Roper Knight (last seen as Barmade in the BBC's *December Rose*), who plays Henry with just the right amount of self-absorption. Viewers should note that two episodes are being transmitted each week - fine once you're used to it, but a difficult habit to get into.

Hugh David

Women's work

SCHOOLS TELEVISION
World Studies
Half the World's People
ITV, Central
Friday, October 24 and 31, 10.48am.

Half the world's people, women, do 65 per cent of the world's work, grow 50 per cent of the world's food, but earn only one per cent of the world's income. This is the stark reality of the world's women, as presented in the new *World Studies* series. It puts the statistics in pie-charts, and illustrates

minutes their reality with shots of women bent double planting rice, or walking straight and tall carrying water. This is their invisible work, unrecognized, unpaid and undervalued. They do it with dignity, faces serious, bodies strong and beautiful. But many barely stop even to give birth, which proves the strength only of those who survive. They have to have children to help with the work. Girls assume domestic responsibilities as early as five years old, and can't be spared to go to school as boys can. Thus a third of the world's women are illiterate.

With industrialization comes further exploitation. Women in underdeveloped countries provide a cheap, reliable and docile work force, because they have no alternative means to 'undo' them. Hence the dominant image is the sewing machine, rows of them separate work into isolated individual

units; each woman isolated too, head down, concentrated and trapped. Seven presenters, including Glensy Knack and Beverley Anderson, make the points with clarity and passion. What's needed for change, they say, is education and cooperative action. Most important, insists Eeva Graham, is that women have a voice, to make sure, by lobbying at policy-making level, that they're not forgotten. But getting that voice is not so easy: women in politics are rare even in developed countries. Only four per cent of British MPs are women.

The programme leaves us with more images of women's work, 'romanticized' new with soft focus and haunting music, women pounding, thrashing, preparing food, and always, condescendingly, gratefully and intent in the monotonous, back-breaking, interminable fetching of water.

Jessica Savage

briefings
radio & tv

For schools

SCHOOL'S OUT
(Monday, 10.45 ITV)

Repeated to catch 14 to 16-year-olds at home for half term, the first of two programmes about the Youth Training Scheme explains its aims and objectives and talks to trainers and trainees.

PLAYTIME
(Mon 14.05, Fri 11.20 VHF4)
In this unit infants begin by listening to the wind and sweeping up fallen leaves. Then they hear 'The Surprise', a story in which Frog and Toad help each other on a windy day.

THE FRENCH PROGRAMME
(Wednesday, 11.30 ITV)
Action-Télé Year 3 is a series of five programmes for exploitation with a variety of examination students.

LOOKING AT NATURE
(Wednesday, 14.05 VHF4)
Timmy Mallett joins Robin Robbins of the Inner London Education Authority's Junior and Infant Science Teacher Training Unit to look for signs of wildlife harvests and "early winter snoozers".

BRITISH SOCIAL HISTORY
(Thursday, 10.38 BBC2)
'Nine Days in May' uses a combination of drama and archive film to reconstruct aspects of the General Strike of 1926 in Birmingham.

EARTH SEARCH
(Friday, 11.00 VHF4)
'A Portrait of Britain' ends with a visit to a seaside town. Why did the seaside become popular? Nine to 11-year-olds investigate in Brighton.

A CLASS APART
(Thursday, 19.40 R4)
Is a separate educational system for disabled children really necessary? This programme on the state of special education includes a report by Kevin Mulhern, a phone-in, free factsheets and a studio discussion.

4	Times Available For Recording From Sunday 26 October 1986	Approximate Transmission Times.	guid
Sunday 26 October	4.30 Monopoly Special: The Big Bang	Friday 31 October	
5.15 The British Programme For Code F	5.15 The British Programme For Code F	5.15 A Week In Politics For Code B	
Monday 27 October	6.00 Print For Yourself - Repeat For Code A	10.30 Mission For Mad For Code C	
Tuesday 28 October	3.45 10 million	Saturday 1 November	
Wednesday 29 October	6.00 Right To Reply For Code A	10.30am The Heat Of The Dragon (Repeat)	
Thursday 30 October	6.00 Right To Reply For Code A	For details of the archive, and any other information, contact Judith Funnell at	
		GUIDE LICENSING	
		8 Royce Road, Peterborough PE1 5YB	
		(0753) 315215	
		Late Changes (0753) 512152	

Wicken wanderers

Extracts from the children's newspaper (from top to bottom):

Extracts from the children's newspaper (from top to bottom).
We have lift off
This morning we walked round Wicken village and saw a lot of thatched houses.
When we went for a walk we saw a swan's nest. It was HUGE!
After a day at the pool

Important implications about the role allotted to image-making versus written work in the school were already emerging. It seemed as though total retraining, and restructuring would be needed to put photography into the basic curriculum.

On Tuesday the group, now labelled The Photographers, were allowed to concentrate on their photography on the Village Trail. They could take more control of the process by select-

Even in this school, which will remain an interesting but demanding extra. It will take much time and effort to change attitudes in the primary sector, but it is here that the foundation of visual literacy must be laid.

Cathy Groves

FREE PENGUINS

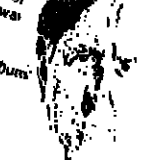
**OR CHOOSE ONE
FROM EACH
SELECTION**

THE TIMES
Educational Supplement



The Purple Decades

Wrote the Great
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Author and the
Collection is his
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- Pops back in
New Society



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MIDDLE SCHOOL
EDUCATION

Scale 1 Posts

DORSET
BOVINGTON MIDDLE SCHOOL
Weymouth B122 6NU
(350 on roll, age 9-13)
Required for January 1987, a teacher of general subjects (scale 1) to a first year form with ability to teach Mathematics throughout the school.
Apply by letter to the Headmaster giving all relevant details. (35059)125624

MERTON
LONDON BOROUGH OF
EDUCATION COMMITTEE
MERTON IS AN EQUAL OPPORTUNITIES EMPLOYER.
ST. ANDREW'S MIDDLE SCHOOL
Chesham Road, Norbury SW16 3JH
Tel: 01-764 3892
Head Teacher: Mr. C. Webb
Age Range: 9-13 Years
No. on roll: 406
General Subjects Teachers required as soon as possible on temporary cover for maternity leave.
CLOSING DATE: A.S.A.P.
Application forms and further particulars are available from the Head Teacher at the above address. Please enclose a stamped addressed envelope (35057) 125622

MERTON
LONDON BOROUGH OF
EDUCATION COMMITTEE
MERTON IS AN EQUAL OPPORTUNITIES EMPLOYER.
ST. ANDREW'S MIDDLE SCHOOL
Chesham Road, Norbury SW16 3JH
Tel: 01-764 3892
Head Teacher: Mrs R.C. Wharton
Age Range: 9-13 Years
No. on roll: 319
General Subjects Teacher for class of 8-10 year olds, temporary for one term to cover maternity leave.
CLOSING DATE: A.S.A.P.
Application forms and further particulars are available from the Head Teacher at the above address. Please enclose a stamped addressed envelope (35058) 125622

Remedial and Special
Needs Teaching Posts

Heads of Department

BARNET
LONDON BOROUGH OF
EDUCATION COMMITTEE
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HILLINGDON
LONDON BOROUGH OF
EDUCATION COMMITTEE
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Age Range: 9-13 Years
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CALDERDALE
METROPOLITAN BOROUGH OF
EDUCATION COMMITTEE
CALDERDALE IS AN EQUAL OPPORTUNITIES EMPLOYER.
ST. ANDREW'S MIDDLE SCHOOL
Chesham Road, Norbury SW16 3JH
Tel: 01-764 3892
Head Teacher: Mrs R.C. Wharton
Age Range: 9-13 Years
No. on roll: 319
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CLOSING DATE: A.S.A.P.
Application forms and further particulars are available from the Head Teacher at the above address. Please enclose a stamped addressed envelope (35058) 125622

Come and teach in Kent

Bring your teaching skills and experience to Kent. We are one of the Major Education Authorities in the Country and offer you the opportunities and support which a large and forward looking Authority can bring. Currently we are making major changes within the Education Department which will improve the service we give parents, pupils, students and you, the teacher.

Reasonably priced accommodation can still be found in many areas of Kent and wherever you choose to live, you will be close to beautiful countryside and coastline. Excellent road, rail and other transport networks make for easy commuting within the county and ensure good access to London, the Coast and Europe.

For certain posts, where specified, generous relocation/disturbance allowances are available. Some temporary accommodation may also be available, particularly in Mid Kent.

For details of our current vacancies see our advertisements under the various classifications in this supplement (this map will be useful to identify the area in which the vacancy occurs).

Whether it be for promotion, your first teaching post or change of responsibilities and surroundings applications are invited from all suitable candidates. We look forward to hearing from you.

KENT
County Council

EDUCATION DEPARTMENT
MID KENT AREA

Swadlands School,
Lenham, Maidstone ME17 2QJ.

Appointment of

Headteacher

Group 10 Roll 862

Applications are invited for the post of Headteacher of this Group 10 High School to take effect from April 1987. Application forms and further particulars obtainable from the Mid Kent Area Education Office, Astley House, Hastings Road, Maidstone, Kent ME15 7SQ (see please) returnable by 14th November 1986.



NORTHAMPTONSHIRE

THRAPSTON KING JOHN SCHOOL
Market Road, Thrapston, Northants.
NN4 4JU

Required January 1987 at this 9 to 13 Middle School TWO TEACHERS capable of teaching the normal range of class room subjects.

Application forms and further details available from the Headmaster on receipt of an S.A.E.

Closing date 3 weeks after appearance of this advertisement.

Northamptonshire welcomes applications regardless of marital status, sex, race and disability. 135622 (35071)

Secondary Education

Headships

KENT
COUNTY COUNCIL
EDUCATION DEPARTMENT
NORTH WEST KENT AREA
Maidstone, Kent
APPOINTMENT OF HEAD TEACHER
Longfield School is a wide ability Upper School for pupils aged 13-18. It is situated on a large, attractive site in a semi-rural setting. There are approximately 800 pupils on roll.

The vacancy arises because of the retirement of the previous Post holder. A well qualified and experienced graduate teacher is sought to lead the school.

Applications and further details available from the Area Education Officer, North West Kent Area Education Office, 12, Windmill Street, Gravesend, Kent DA12 1JL to whom they should be returned by 11.11.86.

This Authority operates a generous disturbance allowance scheme.

This is a re-advertisement and previous applicants should indicate if they wish to be re-considered.

Availability of help with temporary housing in approved cases. (31718) 135016

Deputy Headships

Second Masters/Mistresses

HERTFORDSHIRE
ST. MARY'S CATHOLIC
School, Bishop's Cleeve, Hereford.
Headmaster: R.P.M. Gregory.
Roll: 680 pupils (86 in the 6th Form).

Following the promotion of the current holder to a Headship, a vacancy has arisen for the position of Deputy Head (Group 8) at this well-subscribed, co-educational school. Applications for this post are invited from well-qualified, experienced, practising Catholic teachers to commence in April 1987 or as soon as possible thereafter. Further details and application forms are available from the Headmaster at the school or by telephone. Closing date for applications: 12th November 1986. London Allowance (Outer Post) Payable. 135012 (35059)

LONDON

BACON'S SCHOOL
Barnet, London NW4 2AA
Tel: 01-327 8243

Two Deputy Headships to be appointed in January 1987. One for English and Mathematics, the other for Science and Technology. The successful candidates will be responsible for the day-to-day running of the school and will report to the Headmaster. Applications should be sent to the Headmaster at the above address. Closing date: 12th November 1986. Further details and application forms are available from the Headmaster. 135012 (35059)

BUCKINGHAMSHIRE
MILTON KEVIN SCHOOL
Milton Keynes MK14 6JH
Tel: 01295 22111

Required for January 1987 a teacher of English and Mathematics to a first year form. The successful candidate will be responsible for the day-to-day running of the school and will report to the Headmaster. Applications should be sent to the Headmaster at the above address. Closing date: 12th November 1986. Further details and application forms are available from the Headmaster. 135012 (35059)

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Scale 2 Posts and above

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COUNTY COUNCIL
An Equal Opportunity Employer

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Quorn, Leicestershire, LE15 3QH

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Scale 2 Posts and above

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Scale 2 Posts and above

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COUNTY COUNCIL
An Equal Opportunity Employer

THE RAWLINS UPPER SCHOOL AND COMMUNITY COLLEGE
Quorn, Leicestershire, LE15 3QH

Required January 1987 a teacher of English and Mathematics to a first year form. The successful candidate

PREPARATORY SCHOOLS

Remedial and Special Needs Teaching Posts

Heads of Department

WIRRAL
KINGSHEAD SCHOOL,
Haydock, Wirral L47 0LL.
A REMEDIAL TEACHER with an interest in dyslexia to be employed for January 1987. Salary £10,000 per annum. Applications should be sent to the Headmaster, Kingshead School, Haydock, Wirral L47 0LL. (31503) 201018

By Subject Classification

Art and Design

Heads of Department

LONDON NW7
BELLINCHAM SCHOOL,
Addiscombe Road, London NW7 4ED.
Requires in January 1987 for Art, Design and Music. Salary £10,000 per annum. Applications should be sent to the Headmaster, Bellincham School, Addiscombe Road, London NW7 4ED. (31545) 201218

Computer Studies

Heads of Department

KENT
Required for April 1987 (or earlier if available) head of computers to expand and develop existing department. Salary £10,000 per annum. Applications should be sent to the Headmaster, Kingshead School, Haydock, Wirral L47 0LL. (31503) 201018

Mathematics

Other Assistants

WEST SUSSEX
Required for January 1987 a qualified part time teacher of mathematics for a year. Salary £10,000 per annum. Applications should be sent to the Headmaster, Kingshead School, Haydock, Wirral L47 0LL. (31503) 201018

APPOINTMENTS IN SCOTLAND

Lothian Regional Council DEPARTMENT OF EDUCATION TEACHING APPOINTMENTS

Applications are invited from the registered teachers for the undernoted posts.

Post	Responsibility	Salary
HEAD TEACHER (Re-admission)	Primary School	£4,305
HEAD TEACHER	Longstone Primary School	£4,800

Salary will be in accordance with the current Scottish Teachers Salaries memorandum.

Application forms and further particulars for the above posts may be obtained from the Head of Personnel, Personnel Section, 40 Torphichen Street, Edinburgh EH3 8JL.

Closing date for applications - 7 November 1986.

Lothian Regional Council is an Equal Opportunities Employer and will prevent discrimination on the grounds of sex, marital status, disability, race, colour, religion, sexual orientation, nationality or ethnic origin.

Other Assistants

Classification

Other Assistants

LONDON NW1
Required for January 1987 a qualified and experienced teacher of music to take charge of the music department and teach class music throughout the year. Salary £10,000 per annum. Applications should be sent to the Headmaster, Kingshead School, Haydock, Wirral L47 0LL. (31503) 201018

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Other Assistants

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Required for January 1987 a qualified and experienced teacher of music to take charge of the music department and teach class music throughout the year. Salary £10,000 per annum. Applications should be sent to the Headmaster, Kingshead School, Haydock, Wirral L47 0LL. (31503) 201018

By Subject Classification

Art and Design

Heads of Department

LONDON NW7
BELLINCHAM SCHOOL,
Addiscombe Road, London NW7 4ED.
Requires in January 1987 for Art, Design and Music. Salary £10,000 per annum. Applications should be sent to the Headmaster, Bellincham School, Addiscombe Road, London NW7 4ED. (31545) 201218

Computer Studies

Heads of Department

KENT
Required for April 1987 (or earlier if available) head of computers to expand and develop existing department. Salary £10,000 per annum. Applications should be sent to the Headmaster, Kingshead School, Haydock, Wirral L47 0LL. (31503) 201018

Mathematics

Other Assistants

WEST SUSSEX
Required for January 1987 a qualified part time teacher of mathematics for a year. Salary £10,000 per annum. Applications should be sent to the Headmaster, Kingshead School, Haydock, Wirral L47 0LL. (31503) 201018

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Computer Studies

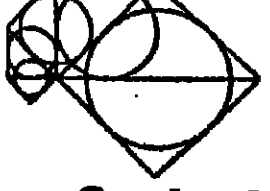
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Mathematics

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Mid-Kent College

of Higher and Further Education

Senior Lecturer in Personnel Management

Applications are invited from suitably qualified and experienced persons for the above post to commence duties on 1 January 1987.

The successful applicant will contribute to the teaching and running of personnel management courses.

He/she may have a degree and preferably a post graduate and/or professional qualification as well as substantial personnel management experience.

Salary scale: £12,615 - £14,820 (bar) £15,873

Further details and application forms available from the Principal, Mid-Kent College of Higher and Further Education, Maidstone Road, Chatham, Kent, ME5 8UG, (telephone 0634-4470 ext 240), to whom completed forms should be returned by 31 October 1986.

BOURNEMOUTH AND POOLE COLLEGE OF FURTHER EDUCATION (GROUP 8)

PRINCIPAL

(Salary within the range £27,174 - £28,363)

REQUIRED 1st September 1987.

The College has 3036 F.T.E. students with Department of Building; Applied Engineering; Engineering Technology; Science, Mathematics and Computing; Catering, Tourism and Hotel Operations; Business Studies; Social and Community Studies and General Academic Studies.

Application forms and further particulars are available from the County Education Officer, County Hall, Dorset, DT1 1XJ.

Closing date 31st October, 1986.

LANCASHIRE County Council

AN EQUAL OPPORTUNITY EMPLOYER

LANCASTER AND MORECAMBE COLLEGE

Morecambe Road, Lancaster

Required for 1st January, 1987, or as soon as possible thereafter.

PRINCIPAL

Group 5 - £24,082 per annum

The College is the major provider of Further Education for a large area of North Lancashire.

The post becomes vacant due to the retirement of the present postholder.

Previous applicants will be automatically re-considered.

Application forms available from/returnable to the District Education Officer, Education Office, High Street House, High Street, Lancaster (LA6 3PL).

Closing date: 6th November, 1986.

DURHAM COUNTY COUNCIL

NEW COLLEGE DURHAM

Principals D. Turner, B.A., Dip Ed., F.R.S.M.

SCHOOL OF ELECTRICAL AND ELECTRONIC ENGINEERING

Lecturer Grade 1/II Robotics

Microprocessor Systems

Industrial Control Systems

Computer Applications

Applications are invited for the post to teach on BTEC courses up to HNC level in the above subjects. The successful applicant will be responsible for the teaching and running of the above courses in one or more of the subject areas mentioned and will be particularly welcomed from persons with experience in the above subjects.

Further details and application forms, returnable by Friday, 21st October, 1986, are available from the Principal, New College Durham, Riverside Road, Durham, DH1 1TA. Tel: 0191 266 1111.

Lancashire County Council

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LANCASTER AND MORECAMBE COLLEGE

Morecambe Road, Lancaster

Required for 1st January, 1987, or as soon as possible thereafter.

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Closing date: 6th November, 1986.

Royal County of Berkshire

NEWBURY COLLEGE

Oxford Road, Newbury, Berks. RG13 1PQ

Tel: Newbury 42824/37000

Required for January 1987

HEAD OF MANAGEMENT STUDIES SECTION (Senior Lecturer)

within the Department of Business Studies. Applicants should be graduates or professionally qualified in a business-related field, with substantial management experience in both industry and Further/Higher Education. The person appointed will be expected to promote rapid development of both management qualification programmes and short, self-supporting courses as well as teaching one of the fields: (a) Financial/Management Accounting or (b) Management Information Systems (Micro-based) or (c) Selling Techniques.

Salary: £12,615 - £15,873

LECTURER II IN REMEDIAL EDUCATION

to be responsible for full-time Work Preparation Course and to organise the College's Adult Basic Education Programme.

Salary: £8,595 - £13,656

Application forms and further details available from the Principal's Secretary (Ext. 209). Closing date: 7th November.

An equal opportunity employer.

DURHAM COUNTY COUNCIL

EDUCATION DEPARTMENT

SCHOOL OF ELECTRICAL AND ELECTRONIC ENGINEERING

Lecturer Grade 1/II Robotics

Microprocessor Systems

Industrial Control Systems

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CHIEF ADVISER SOULBURY H.T. GROUP 11

£21,513 pa - £23,058 pa

INCLUDING OUTER LONDON WEIGHTING
PLUS ESSENTIAL CAR USER ALLOWANCE

The Chief Adviser is a member of the Director of Education's Senior Management Team with the responsibility of overseeing the Authority's well-established monitoring and inspection procedures and, in co-operation with the Assistant Director (Development), organising the Authority's In-Service Training Programme in order to promote curriculum development and the continuing improvement of the quality of education in the Authority's schools.

Candidates must have substantial experience both in teaching and advisory posts, have acquired management ability in the education service and be capable of leading a strong team of Advisers.

Relocation expenses may include 100% legal fees involved for house sale and purchase, 100% removal expenses, temporary lodging allowance plus a settling in allowance of £990 in respect of incidental expenses incurred.

London Borough of
Hillingdon

Application forms and further particulars available from the Personnel Office, Civic Centre, Uxbridge, Middlesex UB8 3UW quoting ref E/26/89X. Telephone Uxbridge 50589 (24 hour answering service).

Closing date: 12 November 1986.

(02020)



**Buckinghamshire
County Council**

Equal Opportunity Employer

EDUCATION DEPARTMENT

PRINCIPAL ADVISER

Salary: £22,251-£23,700 (Soulbury Group 12)

This most important and challenging post will fall vacant from 1st September 1987.

The Principal Adviser leads a team of 20 advisers and co-ordinates all advisory services to enhance the quality of the full range of educational provision in Britain's fastest growing county.

Applicants should have substantial and varied teaching experience and ideally should have gained management skills in a senior position in education, including experience as an adviser.

Further details and application forms from Chief Education Officer, County Hall, Aylesbury HP20 1UZ (Telephone: Aylesbury (0298) 385000, Ext. 800/602. Applicants should be returned within 2 weeks of this advertisement.

(02975)

DIRECTORATE OF EDUCATIONAL SERVICES

Senior Assistant Education Officer

SALARY: Grade PO7: £18,654 to £19,818 per annum inclusive

This is a senior post as head of the Secondary Schools Branch and carries responsibility for Secondary Education and Welfare Services; the post-holder is a member of the senior management team. Essential car user allowance, temporary housing, and/or assistance with removal expenses in approved cases.

Closing date 7th November, 1986 Ref. ADM/E/32

Further particulars and application forms obtainable from the Director of Educational Services, Town Hall, Friern Barnet, London N.11 3DL. Telephone 01 368 1255.

(02060)

AN AUTHORITY COMMITTED TO EQUAL OPPORTUNITIES

**London Borough of
Friern Barnet**

OVERSEAS POSTS

(continued)

TEACHOVERSEAS

JOIN THE INTERNATIONAL EDUCATOR'S INSTITUTE

And receive its quarterly newsletter featuring news, views, and information on overseas employment, plus advice and other significant benefits.

Write to: TIE U.K. Coordinator, 20 Littlefield Road, Gillingham W5 1QR, England. (015587) 460000

TURKEY

Wanted as soon as possible (at latest by January) two qualified teachers of English for private primary school in Kayseri. Good pay and conditions. Please send full C.V. and photocopies of teaching certificates to: Kayseri, Turkey, T.E.D. Kayseri Koltagi P.K. 56. Further information will be sent on receipt of application. 460000 (02504)

UNITED ARAB EMIRATES

AL RABEEH SCHOOL
Abu Dhabi, United Arab Emirates

Al Rabeeh is an international school with 550 pupils ranging in age from nursery to the equivalent of first year. Juniors with the intention of increasing the age range to encompass full primary education over the next three years.

The children are taught in English and Arabic and at present we have eleven overseas contract staff in addition to locally employed teachers and assistants.

We require a Headteacher for April 1987 to take over from the present incumbent in September 1987, who has been with the school for two years.

The successful candidate will have had a minimum of three years teaching experience, preferably having responsibility for curriculum development and administration.

A three year contract is offered, generous tax free salary, car, flight, and accommodation with free electricity and water. A K.P. accompanied spouse allowance, and of service gratuity.

Please send a handwritten letter of application, C.V., two photographs, and references and testimonials to Mrs. Sallie Merritt, c/o Palm Jumeirah, P.O. Box 100, Dubai, U.A.E. Interviews will be held in November/December 1986. (01558) 460000

USA/EUROPE

An exciting opportunity to work abroad 1987/8. Modern language teachers are invited to apply for post-exchange of between 6 and 1 year in Austria, Belgium, France, F.R.G., Spain, Switzerland, USSR.

Primary, Secondary, Post-Secondary teachers/lecturers are invited to the United States of America for 1 academic year minimum 4 years teaching experience.

A cost of living allowance and the cost of return travel are payable to participants. For further details send A4 SAE indicating country of interest to: Central Bureau, (T.X.), Seymour Mews House, Seymour Mews, London W18 7PS. Tel: 01-486 5101. Ext. 274. (02598) 460000

Administration Local Education Authority

BEDFORDSHIRE

EDUCATION SERVICE
Re-Advertisement
INFORMATION AND ACCREDITATION

1 year contract - 37 hours Based at County Hall, Bedford January - June 1987. Then Chamber of Commerce July - December 1987. Salary: £11,131-11,594 p.a.

Applications are invited for the post of Project Manager for a one-year MSC funded project which has been awarded to establish an Employee In-Formation Service and Adult Education Scheme for Bedfordshire. The E.I.S. will include information about existing courses, a marketing potential programme for new courses, and a training programme for staff.

The A.E.S. will be based on the current A.E.S. Unit accreditation system and procedures for both providers and clients will need to be formulated and agreed. The Project Manager will be assisted by a Project Assistant and Clerical Support. Further details/application forms from Chief Education Officer, County Hall, Bedford (04561) Tel: Bedford 228156. Closing date: 7th November 1986. An Equal Opportunities Employer. (01710) 460000

BEDFORDSHIRE

EDUCATION SERVICE
PROJECT ASSISTANT
Further Education
Department
6 Month MSC funded post
Grade Lecturer II (£8,594 - £12,161)

Required as soon as possible, a person to assist the Project Manager in the short-term project, to assist in the management of a feasibility study for a new approach to education funded by the work of a Committee of Education Officers and Clerical Assistants.

Application forms/further particulars available from: County Hall, Bedford (04561) Bedford 228156. Closing date for the post: 7th November 1986. An Equal Opportunities Employer. (02580) 460000

ASSISTANT EDUCATION OFFICER

POST No. E90

£16,374 - £17,538 per annum

Applications are invited for this key post based at Headquarters County Hall, Ipswich. The post holder will be primarily engaged in all aspects of the County's review of school provision. For this and other, more general, duties relating to the development and rationalisation of school provision, the successful candidate will need to possess an awareness of current educational issues, both in curriculum and management terms.

Good communication skills will be essential as the post holder will be expected to play a full part in the public relations, reporting to committees and member groups and consultations involving a wide range of interested groups.

Applicants should possess a good honours degree or equivalent and successful teaching experience.

Application forms and a detailed job description are available from the County Education Officer, St Andrew House, County Hall, Ipswich, IP4 1LJ. (Please enclose a stamped addressed envelope).

Closing date: 3rd November 1986

(02027)

Suffolk County Council



HAMPSHIRE EDUCATION DEPARTMENT

Applications are invited for the following four vacancies in our Advisory Division:

Re-Advertisement

Senior Advisory Officer (Pre-School, Primary & Middle Years)

Soulbury HT 11 Salary: £20,787 - £22,332

This is a second tier post in a large advisory team. Responsibility for a Primary Team comprising a Team Leader and 7 Advisers and for the promotion within Hampshire, its schools and colleges, of the interests of the younger children and their teachers, are features of the post.

Applicants must be qualified teachers with substantial experience in the primary sector, including Headship, and should be experienced in a general advisory role in an LEA or in work of a similar nature.

Reference CE12.002

Interviews on 4th & 5th December, 1986.

General Advisor With responsibility for Multi-cultural Education

Soulbury HT 9 Salary: £18,075 - £19,587

This new post, which we hope to fill for the 1st January, 1987 or as soon as possible thereafter, will be responsible for implementing the Authority's multi-cultural policy. This will involve working in close co-operation with a large team of advisers and other agencies in institutions throughout the Education Service.

We seek a qualified teacher with substantial experience and responsibility in education and proven experience of cultural, staff and institutional development in multi-cultural education.

Reference CE12.041

Closing dates for all these posts is the 10th November, 1986. Car owner and full drivers license essential for all advertised posts. The County Council operates a policy of equality of opportunity. Generous relocation package applies in approved cases.

Application forms and further details from Education Personnel Unit, The Castle, Winchester, SO23 8UG, (0962) 84411 ext. 225.

Area Advisory Officer (Fareham/Gosport)

Soulbury HT 10 Salary: £18,260 - £20,766

A senior member of the County Advisory Service and responsible to the Principal Adviser, the Area Advisory Officer.

Supervises the general educational standards in the area.

Provides effective advice to the Area Education Officer and educational institutions in the area.

Co-ordinates in-service training for the staff of those institutions.

Applicants must have successful experience of senior management in primary or secondary education; experience as an advisor would be desirable.

Reference CE12.017

Re-Advertisement

Advisor for Adult, Youth & Community Education

Soulbury HT 8 Salary: £16,786 - £18,273

A suitably qualified candidate, experienced in Adult, Youth & Community work with particular reference to Adult Basic Education, is required for the 1st January, 1987 or as soon as possible thereafter. The Advisor will:

Be member of a team of 5, led by a County Advisor, responsible for the provision and development of Adult, Youth & Community Education throughout Hampshire.

Have particular responsibility in the first instance for the education areas of North-East and East Hampshire.

Reference CE12.076

Closing dates for all these posts is the 10th November, 1986. Car owner and full drivers license essential for all advertised posts. The County Council operates a policy of equality of opportunity. Generous relocation package applies in approved cases.

(02020)

ADMINISTRATION L.E.A. continued and GENERAL ADMINISTRATION

DACORUM DIVISIONAL EDUCATION OFFICE

The Bury, Queensway
Hemel Hempstead, Herts. HP1 1UQ

Education Welfare Officer

required to join a team of three engaged in this important work in a pleasant part of Hertfordshire.

Previous experience of education welfare or other social work an advantage. Driving licence essential: car allowance payable. Help with rented housing may be available in approved cases.

Salary scale, with qualification bars, within the national Joint Council for APT & C Services Scale 4/5, £7636 - £9441 inclusive of Fringe Allowance.

Further particulars and application forms from the Divisional Education Officer. (S.a.e. please).

Closing Date: Friday 7th November, 1986.

(02024)



**Hertfordshire
County Council**
An Equal Opportunity Employer



**Buckinghamshire
County Council**
Equal Opportunity Employer

Education Department

ASSISTANT EDUCATION OFFICER

(Schools/Youth & Community)

PO 4/5 (£14,882-£17,160 p.a.)

This redesigned post will carry significant and varied responsibilities in both the Schools and Youth & Community Sections. Applicants are invited from good honours graduates with teaching experience who have already entered education administration.

Further details and application forms for these vacancies are available from Chief Education Officer, County Hall, Aylesbury HP20 1UZ (or telephone Aylesbury 5000 Ext. 6129). Closing date for applications: 7th November 1986.

This is a re-advertisement and previous applications will be carried forward. (02577)

Somerset County Council

AN EQUAL OPPORTUNITIES EMPLOYER

EDUCATION DEPARTMENT

Strode College, Church Road, Street,
Somerset BA16 0AB

CHIEF ADMINISTRATIVE OFFICER

(PO 2 - Salary Range £12,287 - £13,280)

Applicants are invited for the post of Chief Administrative Officer at this College. The person appointed will be responsible for the overall control of College administration including financial and of a range of clerical and other support services. In addition, the post holder will act as Clerk to the College Governing Body and Secretary to the Academic Board.

This Group 4 Tertiary College is responsible for providing a wide range of general, vocational and leisure courses for post 16 school leavers and adults in the mid-Somerset area. It has almost 100 full-time teaching and non-teaching staff and a larger number of part-time employees. In the present financial year the College will have a gross expenditure in excess of £14 million.

The post therefore offers excellent all-round experience in a tertiary and tertiary college for a candidate of graduate or equivalent professional level seeking a progressive step in educational administration.

Further particulars and application forms (S.A.E. please) may be obtained from the Principal at the above address.

NOTE: This is a re-advertisement; previous applicants will be considered and need not re-apply.

CLOSING DATE: 7 November 1986.

(02584)

LINCOLNSHIRE

EDUCATION DEPARTMENT
EVEL DIRECTOR
£19,260 - £20,766

Lincolnshire wishes to appoint a Director for its EVEL pilot project which is based in Louthborough in the North of Lincolnshire.

The appointment will be permanent to the service of Louthborough with a salary and conditions of a Senior Inspector in the County's Curriculum and Inspection Branch.

The successful candidate will be seconded on a full-time basis to the EVEL pilot project for three years, and revert to duties within that time.

The appointment will be made on the Soulbury Scale and an application form may be obtained from the Director of Education (Ref: C61) County Offices, Newland, Lincoln LN1 1YQ. Tel: Lincoln 29931, Ext. 5284. Closing date: 7 November 1986. (01529) (15161) 480000

HILLINGDON

EDUCATION DEPARTMENT

CAREERS OFFICER

SCALE 5 £4,129 p.a. - £5,954 p.a. inclusive

Applications are invited for the post of Careers Officer, Hillingdon, with specific responsibility for two schools. The successful candidate must be qualified (although inexperienced candidates will be considered), motivated and able to take the opportunity to develop the work in an innovative and committed manner in a forward-looking service.

Inexperienced candidates would be appointed on Scale 4 (£3,049 p.a.).

Prime benefits may include 7.5% removal expenses, rent free house, £1,100 and temporary lodging allowance. Car allowance payable as appropriate should be required.

Application forms and further particulars available from the Personnel Office, Civic Centre, Hillingdon, Uxbridge UB8 3UW. Tel: Uxbridge 50589. Closing date: 7 November 1986. (01575) 480000

SCHOOL CURRICULUM DEVELOPMENT COMMITTEE In association with DTI, DES, LEAs, CBI, Industrial Sponsors and the TUC THE SCHOOL CURRICULUM INDUSTRY PARTNERSHIP

Following the establishment of the Partnership, September 1986 to August 1989, applications are invited for the post of



National Co-Ordinator

Effective from September 1st 1987 to August 1989

The National Coordinator will be responsible for the implementation of the agreed Partnership brief SCIP is currently working nationally with over 50 LEAs to promote effective change in the school curriculum through support to teachers in classrooms. The Partnership will seek to bring together educationalists, industrialists, and trade unionists to enable young people, regardless of age, sex, ability or culture to obtain a deeper understanding of the industrial world in which they live through active participation.

The successful candidate will be expected to demonstrate:

- A sound knowledge and practical experience of curriculum development, research and evaluation with particular relevance to education and industry.
- A high national status in the world of education/industry.
- A strong commitment to the notion of changing the curriculum through support to practising teachers.
- Considerable management, diplomatic, writing and editorial skills.

The successful candidate may apply for secondment on current salary plus an allowance or will be offered a fixed term contract within the range £5,683 to £20,830 (inclusive). The appointment will commence on 1 September 1987 for two years in the first instance, but could be extended subject to future management decisions.

Application forms and further details from: Admin Team, SCDC, Newcombe House, 45 Notting Hill Gate, LONDON W11 3JB. Telephone 01-229 1234 ext. 2923. Closing date 7 November 1986.

(02541)

SCHOOL CURRICULUM DEVELOPMENT COMMITTEE



Head of Information Centre

A Head of Information Centre - Higher Executive Officer grade is required by the SCDC to manage the centre on a day-to-day basis, directing the work of the seven staff. The centre provides services in the areas of Information, Library, Press and Publicity.

Tasks include:-

- developing an information system for SCDC, related organisations and the Education community;
- contributing to the work of the committees;
- overseeing the development of the CDB network (Curriculum Development Base);
- managing a network of resource and development bases;
- advising staff on the use of information systems;
- undertaking research tasks;
- managing the section budget.

Essential:

- Management and communication skills.
- Knowledge/experience of education, curriculum development and assessment.
- Ability to interpret the needs of teachers, advisers and in-house staff.
- Some understanding of computerised information systems.

Desirable:

- Experience of research, development or dissemination work.

Terms:

Salary: £10,795 to £13,308 (inc. L.W.)

Non-contributory Pension Scheme

To apply contact Admin. Team, SCDC, Newcombe House, 45 Notting Hill Gate, London W11 3JB. Tel: 01-229 1234, ext. 292/293. Closing date for applications: 7th November, 1986.

(02540)

LCCI

EXAMINATIONS

LONDON CHAMBER OF COMMERCE AND INDUSTRY EXAMINATIONS BOARD

Applications are invited for the following posts.

EXAMINATIONS OFFICER

(Foreign Languages)

GRADE B

To control and administer the Foreign Languages at Work scheme. Qualifications required are a languages degree, teaching experience and an interest in methods of assessment. Commercial experience would be an advantage.

ASSISTANT EXAMINATIONS OFFICER

(Secretarial Studies)

GRADE D

To assist in the administration of the Group Secretarial Examinations. Appropriate qualifications are required in the secretarial and business field and the applicant should be able to offer administrative experience in education or a related area, an aptitude for detailed procedures and the ability to work as member of a team.

Salaries will be in the range:

Grade B £9,708-£16,164

Grade D £7,556-£12,672

with appropriate pension. Benefits include superannuation scheme, free life and disability insurance and lunch vouchers.

Further details and application forms from: The Director, London Chamber of Commerce and Industry, Examinations Board, Marlborough House, Station Road, Sidcup, Kent DA15 7BJ.

(02587)

WELSH JOINT EDUCATION COMMITTEE CYD-BWYLLGOR ADDYSG CYMRU

DEVELOPMENT OFFICER: VOCATIONAL QUALIFICATION REPORT

(£14,000-£18,000)

(Re-advertisement)

Applications are invited for the post of DEVELOPMENT OFFICER: VOCATIONAL QUALIFICATION PROJECT within the Examinations Department of the Welsh Joint Education Committee.

The salary will be negotiable in the range £14,000-£18,000. The Joint Committee would be prepared to support an application for secondment.

